DOCUMENT RESUME

ED 451 387 CE 081 537

TITLE	Building the Future of Allied Health: Report of the Implementation Task Force of the National Commission on Allied Health.
INSTITUTION	Health Resources and Services Administration (DHHS/PHS), Rockville, MD. Bureau of Health Professions.
PUB DATE	1999-00-00
NOTE	76p.
PUB TYPE	Opinion Papers (120) -- Tests/Questionnaires (160)
EDRS PRICE	MF01/PC04 Plus Postage.
DESCRIPTORS	*Allied Health Occupations; Allied Health Occupations Education; Coordination; *Educational Change; *Educational Cooperation; *Outcomes of Education; Postsecondary Education; Program Implementation; Questionnaires; Research Methodology; *Research Needs; Secondary Education

ABSTRACT

This report presents the implementation plans recommended by the Implementation Task Force (ITF) of the National Commission on Allied Health (NCAH) and reviews the purpose, goals, and impact of each plan. Chapter 1 introduces the NCAH and ITF and provides an overview of the role of allied health in today's health care environment and how that role relates to NCAH's and ITF's goals of fostering education reform, outcomes research, and collaboration. Chapters 2-4 each focus on one of these goals. In chapter 2, which focuses on education, section 1 provides an overview of the forces shaping change in allied health education and of the issues that must be addressed by educational reform, and section 2 presents the strategies ITF selected to advance NCAH education recommendations. In chapter 3, which is on outcomes research, section 1 summarizes the need for assessment data on allied health services, types of research needed, and obstacles to be overcome; and section 2 presents the strategies ITF selected to advance the research needed as an objective foundation for future change. The focus of chapter 4 is collaboration. Section 1 identifies principal areas where collaboration is needed and explains why, and section 2 presents implementation plans ITF developed to advance collaboration in support of shared values. Appendixes include 34 references; survey mailing list, respondents, and instrument; and glossary. (YLB)

Reproductions supplied by EDRS are the best that can be made

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 451 387

Building the Future of Allied Health

Report of the Implementation Task Force of the National Commission on Allied Health

U.S. Department of Health & Human Services
Public Health Service
HRSA
Health Resources & Services Administration
Bureau of Health Professions
Division of Associated, Dental, and Public Health Professions
Allied and Associated Health Branch

CE061537

BEST COPY AVAILABLE

Building the Future of Allied Health

Report of the Implementation Task Force of the National Commission on Allied Health

U.S. Department of Health & Human Services
Public Health Service
HRSA
Health Resources & Services Administration
Bureau of Health Professions
Division of Associated, Dental, and Public Health Professions
Allied and Associated Health Branch

Suggested Citation

U.S. Department of Health and Human Services. *Building the Future of Allied Health: Report of the Implementation Task Force of the National Commission on Allied Health*. Rockville, Maryland: U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Bureau of Health Professions, Division of Associated, Dental, and Public Health Professions, 1999.

Foreword

The National Commission on Allied Health was established by Title VII, Section 302 of the Health Professions Education Extension Amendments of 1992 (P.L. 102-408). The Commission's congressional mandate was to provide advice to the Committee on Labor and Human Resources of the U.S. Senate, the Committee on Energy and Commerce of the U.S. House of Representatives, and the Secretary of the U.S. Department of Health and Human Services. Pursuant to its mandate, the National Commission addressed questions related to allied health and the future role of the allied health professions in the emerging health care delivery system. The National Commission's final report made 12 recommendations specifically directing the future of allied health, and 4 recommendations related to allied health education, workforce, research, and data.

The Implementation Task Force consists of eight experts on allied health education, the allied health workforce, and employer purchasers. The Task Force conducted a comprehensive review of the Commission's recommendations on education reform, outcomes research, and collaboration. Based on the results of this review, the Task Force developed implementation plans. Three of those plans form the basis for three contracts to be issued by the Bureau of Health Professions for the purpose of implementing the National Commission's recommendations. The remaining implementation plans are not currently funded. The Implementation Task Force hopes that the National Commission's recommendations plus the potential impact of these unfunded strategies will stimulate their adoption by the major stakeholders in the allied health community. The Task Force believes that stakeholders should pursue selected strategies based on their tie-in with stakeholder values rather than wait for Federal funding.

Contents

Foreword iii

Executive Summary 1

Chapter 1. Introduction 7
Purpose 7
Allied Health in Today's Health Care Environment 8
Managed Care 8
Utilization Control 9
Reengineering 9
Use of Substitutes 9
Patient Education 9
Educational Preparation, Research, and Collaboration 10
Education Reform 10
Outcomes Research 10
Interprofessional Collaboration 11
Funding Change 11
Critical Issues and Selected Strategies 12

Chapter 2. Education 15
Purpose 15
Addressing Diversity and Minority Health and Cultural Issues 15
Cost Containment 16
Training in Diverse Care Settings 16
Core Curriculum 17
Education and Training for New Skills 17
Disease State Management 17
Educating Patients and Families 18
Recruiting Students 18
Linking 2- and 4-Year Institutions 19
Increasing Diversity 20
Collaborating on Education Reform 20
Implementation Plans for Education 21
Increase Access to Appropriate Clinical Education Sites by Developing Means of Identifying the Cost and Other Benefits of Serving as a Site 21
Develop and Promote Models for Increasing Diversity in Allied Health Education Programs 23
Define Appropriate Scopes of Practice for Allied Health Professions 25
Establish Core Competencies of Allied Health 27

Chapter 3. Outcomes Research 29
Purpose 29
Type of Research Needed 30
Allied Health Effectiveness 30

Outcomes Researchers 32
Allied Health Research Agenda 32
Funding Outcomes Research 34
Implementation Plans for Outcomes Research 34
Develop Clinical Outcomes Measures for Allied Health Treatment across Multiple Patient Care Settings for Disease States 34
Create a Data Base of State Licensure Requirements for Allied Health Professionals and Promote Outcomes-Based Criteria 36
Establish Contracts or RFPs to Examine the Clinical and Cost Effectiveness of Allied Health Practitioners 37
Establish an Institute for Outcomes Measurement Training of Allied Health Professionals That Is Treatment/Patient Focused 38

Chapter 4. Collaboration 41
Purpose 41
Collaborating on Research 42
Collaborating on Education 42
Cost Reduction 43
Care in Alternative Settings 43
Scope-of-Practice Issues 44
Allied Health Representation 44
Implementation Plans for Collaboration 45
Convene an Allied Health Collaborative Steering Committee and Conduct a Conference to Plan Collaboration Initiatives and Promote an Action Agenda 45
Develop Practical Mechanisms to Increase Representation of Allied Health Professionals on Policy and Advisory Boards and Key Deliberative Bodies 49

References 51

Postscript 53

Appendixes
Appendix A. Implementation Task Force 55
Appendix B. Survey Mailing List 56
Appendix C. Survey Respondents 57
Appendix D. Survey 58
Appendix E. Glossary 68

Executive Summary

Role of the Implementation Task Force

The National Commission on Allied Health was established to examine the role of allied health in our current and future health care system. In 1992, Congress authorized the Secretary of Health and Human Services to establish the National Commission to study eight areas of concern for allied health. These areas relate primarily to the supply of allied health personnel, appropriate education of these professionals, and research needed on the allied health professions. The National Commission delivered its final report in 1995.

Subsequently, the Implementation Task Force of the National Commission on Allied Health was formed to ensure that the recommendations of the Commission were not forgotten, but were acted upon and embraced by the allied health community and the following stakeholders:

- Professional associations
- Educational institutions
- Government agencies (State, Federal, and local)
- Foundations
- Health care delivery systems
- Employers and employee groups or purchasers
- The public

This report presents the implementation plans recommended by the Implementation Task Force and reviews the purpose, goals, and impact of each. In developing the plans, the Task Force dealt with only those recommendations of the National Commission on Allied Health related to three key areas:

1. Education reform
2. Outcomes research
3. Collaboration

Issues Driving Change in Allied Health

Today's dynamic evolution of the health care process and system in this country necessitates an evaluation of the role, current and future, of the allied health practitioner. This role is critical and meaningful because allied health practitioners make up an estimated 50 to 60 percent of the health care workforce. Therefore, by virtue of the large numbers of these health care workers, studying and effectively changing allied health education and practice models will have a monumental impact on implementing effective care management programs, controlling utilization patterns, and reducing consumption of health care resources. Although the allied health professions represent a multitude of therapeutic, diagnostic, and preventive areas of health care, their practices and education have common elements, and they share a commonality of purpose and mutual concerns about the health care delivery system.

As a basis for developing the most effective plans for implementing the Commission's recommendations, the Implementation Task Force reviewed the issues that are currently driving change in health care, including change in allied health practice. The Task Force report includes an overview of the following issues:

Managed Care—Managed care can offer new opportunities for allied health professionals, who can deliver cost-effective specialized services that reduce total consumption of health care services. Conversely, managed care's emphasis on cost containment, which lacks sufficient data on the effectiveness of allied health and other services, exerts a negative influence on human resource needs.

Utilization Control—Emerging evidence demonstrates that allied health professionals employing utilization control methods (such as protocols or standards of care) can decrease costs without compromising the quality of care or clinical outcomes. Furthermore, evidence is mounting that utilization control programs implemented by allied health professionals actually *increase* quality and positive clinical outcomes.

Reengineering—Downsizing efforts may not be saving money, since those who are reengineered out of a job sometimes include personnel who have the expertise necessary to avoid misallocation and overuse of clinical services. The focus has been on staff reduction, not on system inefficiencies, more effective utilization of staff skills, or safety and error reduction.

Use of Substitutes—Workers who receive limited training on the job but do not receive a full range of educational opportunities, and lack documented competence, may not be prepared to provide optimum patient care. Thus, their services can lead to higher costs and negative outcomes.

Patient Education—Allied health professionals are well positioned to provide patient education, which is indispensable in today's health care environment, given the emphasis on self-care and health promotion. Furthermore, allied health professionals can encourage behavior modification, which is key in promoting a healthy lifestyle.

Preparing Allied Health for the Future

The job of the Implementation Task Force was to develop a series of implementation plans for the recommendations of the National Commission on Allied Health that relate to education, collaboration, and research.

Education Reform

The purpose of addressing the educational system of allied health providers is to ensure that the educational preparation of allied health professionals evolves with the health care delivery systems. The National Commission stated that allied health professions have the expertise to provide the highest quality of care, but now they must expand their educational preparation to include consumer education, wellness programs, and disease state management, with an eye on appropriate utilization of services. The Implementation Task Force kept that goal in mind as it developed the following implementation plans:

Increase Access to Clinical Education Sites

1. Review the literature for previous studies on the cost of clinical education to the site and use that information to develop models for measurement that include the constraints to educational programs and health care facilities today.
2. Identify and consult with representatives of health care employers, including managed, long-term, rehabilitation, hospice, and acute-care facilities as well as community health centers and home health agencies, to address the issue of the skill mix needed for allied health students prior to entering the clinical setting.
3. Identify and consult with a representative group of at least eight individuals from educational institutions and allied health professions, including certificate, 2-year, 4-year, and graduate programs, to discover the most prevalent benefits of student internships.
4. Contact a representative sample of allied health professional organizations to determine if information is available concerning the value to the clinical site of collaborating with an educational program.
5. Develop a model for use by educational programs to document the cost benefit of

serving as a clinical education site, and assess the appropriateness of the model by seeking input from the professional community and employer consultants.

Increase Diversity

1. Bring together representatives from the 2- and 4-year college programs to work in concert to address the issue of diversity as it relates to the allied health programs within the constraints of those institutions. Diversity in this context refers to the effort to match more closely the cultural and ethnic characteristics of students/providers with those of the populations served.
2. Collect existing models and use them to develop models that are part of a coordinated approach for use by 2- and 4-year institutions in the allied health educational arena in the effort to increase diversity among entering students.
3. Incorporate recruitment, admission, matriculation, graduation, and placement of minority group students as the models are developed.
4. Utilize ongoing needs assessment projects for allied health professions—such as those being conducted in South Carolina, Texas, and Maine—to address the entire country in terms of needs and diversity. The outcomes of these projects were to include restructuring of health professions programs as necessary to (a) produce graduates with a mix of needed skills and competencies, (b) define a funding mechanism to move toward an academic program mix that will produce graduates with an appropriate mix of competencies and skills, (c) promote development of a workforce more reflective of the ethnic and cultural mix of the population, and (d) establish a lasting consortium to link academic programs with communities to produce health in the State.

Define Scopes of Practice

1. Collect the scopes of practice for all allied health disciplines, physician assistants, nursing (including specialists), and pharmacy, and examine those along with the skills typically considered to be those of the physician or dentist.
2. Develop a model to compare and contrast various skill mixes of allied health professionals. A representative group of payers, employers, educators, professions, and accreditors must be involved with the process.
3. Recommend skill expansions where appropriate to further enhance the value of the allied health worker and provide higher quality and lower cost health care.
4. Make recommendations to allied health educators, legislators, and State regulatory bodies concerning the need to educate and retrain allied health professionals so that health care provision will be as efficient and efficacious as possible.

Establish Core Competencies

1. Collect information from the professional organizations on the scopes of practice.
2. Review and integrate the materials, along with the materials developed through the Far West Laboratories and Pew Commission, into a single plan of core education for the 2-year and 4-year programs.
3. Conduct a roundtable of stakeholders to review the document and recommend appropriate action.
4. Encourage the Health Care Financing Administration to incorporate the skill mix information into the reimbursement programs they coordinate.
5. Publicize the document to the education, accreditation, credentialing, and employment bodies for their use.

Outcomes Research

As with nearly all health professions, there are few data to document the benefits that allied health personnel contribute in terms of quality, cost-effectiveness, and access to health care. This deficiency is due, in part, to the lack of outcomes assessment data and the lack of training for allied health professionals to perform outcomes research. The following implementation strategies were developed by the Task Force to advance the National Commission's research recommendations:

1. The Bureau of Health Professions, Agency for Health Care Policy and Research, payers, and professional associations should develop competitive research grants and partnerships for the development of outcomes research in allied health. These funding and partnership opportunities should include measurement of the clinical outcomes effectiveness of allied health service delivery in high-cost, high-volume, and high-risk patient populations. Disease states such as asthma, diabetes, stroke, and cancer should be included in multiple settings such as inpatient, outpatient, home health, and long-term care.
2. A task force of allied health professional associations and networks should be convened to plan the development of a data base of State licensure guidelines for allied health professionals. The task force should develop a plan to compare State guidelines and adopt or develop outcomes-based criteria for licensure and professional regulatory boards that reduce State-to-State variations in practice.
3. The Bureau of Health Professions, the Health Care Financing Administration, or the Agency for Health Care Policy and Research should initiate contracts that give priority funding to applicants who partner with an allied health profession, health care provider, and a payer to examine the clinical and cost effectiveness of allied health practitioners and to develop models of allied health practices that are as effective as, and more efficient than, traditional health-care delivery patterns.
4. Establish an institute for outcomes measurement training that would provide ongoing support and infrastructure for the training of allied health professionals as researchers supported by technology, information systems, and adequate funding. A Request for Proposals to conduct a training conference has been developed and will be open to bid in 1999.

Collaboration

Collaboration is a hallmark of health care, as separate disciplines work cooperatively together. But the challenge identified by the National Commission is to ensure that each allied health profession's unique expertise is leveraged and used to its best advantage, while a core of educational concepts (such as practice guidelines, health promotion, disease management, and patient education) is embraced by all professions.

The Implementation Task Force recommends the following strategies to implement the National Commission's recommendations on collaboration:

1. Support the formation of an Allied Health Collaborative Steering Committee to promote collaboration and cohesiveness among the allied health communities and between allied health and other key stakeholders, such as public and private-sector purchasers, employee and employer groups, foundations, professional associations, State and Federal Government agencies, educational institutions, and the public. The Steering Committee will do the following:
   a. Plan an agenda for action and coordinate, among the allied health communities and between allied health and key stakeholders, the implementation of strategies to address critical issues and the National Commission on Allied Health's recommendations.

b. Plan a conference, consistent with the above, to initiate the interface between allied health and key stakeholders, to promote collaboration to seek positive solutions, and, where possible, to highlight successful statewide initiatives that have effectively addressed issues and needs within a State.

c. Review possible marketing strategies to effectively promote the collaborative agenda.

2. With the allied health leadership from the Association of Schools of Allied Health Professions, the National Network of Health Career Programs in Two-Year Colleges, and the Health Professions Network, the Bureau of Health Professions is the agency that should develop a template to initiate dialogue with Federal Government and other entities, including policy and advisory boards and key deliberative bodies, to assess their mission and requirements for service and to promote a consistent message about the benefits of including allied health professionals as appointees to those entities.

3. Adapt the Citizen Advocacy Center's strategies for identifying effective public members for regulatory boards as a template for identifying allied health professionals to serve on policy and advisory boards. This will reduce the barriers to allied health representation.

The Implementation Task Force believes that advancing the National Commission's recommendations by implementing these strategies will help the allied health professions to take their appropriate place in, and contribute fully to, the emerging health care delivery systems. The strategies will advance this goal by helping to ensure the most productive and cost-efficient training to meet future needs, developing tools to document the effectiveness and cost benefit of allied health services, using data developed to increase the efficiency of allied health services, and communicating effectively with other stakeholders the major contribution allied health professionals can make to goals shared by all.

Chapter 1. Introduction

Purpose

This chapter introduces the National Commission on Allied Health and the Implementation Task Force. It also provides an overview of the role of allied health in today's health care environment and how that role relates to the Commission's and the Task Force's goals of fostering education reform, outcomes research, and collaboration.

The National Commission on Allied Health was established as concerns grew about mounting evidence that the number, mix, and education of allied health professionals may be insufficient or inappropriate to meet the current and future demands of the Nation's evolving health care system. Congress, in the Health Professions Education Extension Amendments of 1992 (PL102-408), authorized the Secretary of Health and Human Services to establish the National Commission to examine the following issues:

- The supply and distribution of allied health professionals throughout the United States.
- Current and future shortages or excesses of allied health professionals, particularly in medically underserved or rural communities.
- Priority research needs within the allied health professions.
- Appropriate Federal policies relating to these matters, including policies concerning changes in the financing of undergraduate and graduate allied health programs, changes in the types of allied health education, and the appropriate Federal role in the development of a research base in the allied health professions.
- Appropriate efforts to be carried out by health care facilities, schools, programs of allied health, and professional associations with respect to these matters, as well as efforts to change undergraduate and graduate allied health education programs and to gain private support for research initiatives.
- Deficiencies and needs for improvement in existing data bases concerning the supply and distribution of training programs for allied health in the United States, and steps that should be taken to eliminate such deficiencies.
- Problems and recommendations for a resolution of such problems relating to the roles and function of professionals within the allied health fields and other fields such as medicine and dentistry.
- Encouragement of entities providing allied health education to conduct activities to voluntarily achieve the recommendations of the Commission.

The National Commission on Allied Health examined these issues and published its report, including recommendations, in 1995. To move these recommendations toward action and ensure that they were not simply read and forgotten, the U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration (HRSA), established an Implementation Task Force (see Appendix A for a member list). The Task Force was charged with conducting a comprehensive review of the Commission's recommendations and developing implementation strategies in three areas:

1. Education reform
2. Outcomes research
3. Collaboration

After completing its assignment, the Task Force forwarded the recommended implementation strategies to HRSA for consideration by its Division of Associated, Dental, and Public Health Professions as the basis for letting three contracts to implement some of the Commission's recommendations.

During the 3 years since the Commission's report was published, limited efforts have been made by all stakeholders, including the allied health community, to act on the Commission's recommendations on a broad front. Unfortunately, there has been no comprehensive and unified effort that included all stakeholders. Not surprisingly, the needs of the allied health community, and of the Nation's health care delivery system as a whole, remain unmet. The Task Force understands how imperative it is for the allied health community to make significant, timely progress toward addressing the needs described in the Commission's report.

Allied Health in Today's Health Care Environment

Allied health personnel are expert in a multitude of therapeutic, diagnostic, and preventive interventions. According to the Commission, these professionals are leaders in the degree and blend of clinical and technical expertise they bring to their specialty areas. Allied health occupations represent approximately 50 to 60 percent of the health care workforce (O'Neil 1993). Yet this large workforce is underrecognized in terms of its ability to assist in the management of health care and the constraint of costs.

Managed Care

The managed care movement has exerted and continues to exert a profound influence on our Nation's health care system. Managed care is a term used to embrace several delivery modes, but the health maintenance organization (HMO) probably comes most readily to mind.

HMOs generally recognize the impact on health care costs of the level of utilization or consumption of health care, both in care settings and in clinical services. In today's health care environment, it seems obvious that these managed care plans would benefit from partnering with the allied health community in efforts to decrease health care consumption by promoting healthy behaviors, offering access to clinical services in diverse care settings that are less-expensive alternatives to hospitals, and providing opportunities for qualified allied health professionals to promote appropriate utilization of services through the application of practice guidelines and protocols.

HMOs and other managed care plans have evolved rapidly over the past decade. In their earlier stages, HMOs promoted prevention and wellness as a critical difference between their structure for health care and that of the fee-for-service indemnity programs usually in place. Due to their newness and this emphasis on wellness, HMOs appeared to attract a population that was younger and had fewer medical conditions than the population as a whole. Also, chronic medical conditions had not yet garnered the increased attention that came with the advent of disease management programs. These factors contributed to the limited use of allied health professionals by HMOs.

With the maturation of HMOs and managed care as an industry, the beneficiary profile has changed. HMO populations are now more representative of the general population; and the profile of HMO subscribers—as of consumers nationally—has changed to include a larger number with chronic illnesses. At the same time, health care costs are rising again and are predicted to reach $2 trillion by 2006 (Smith et al. 1998); and the general increase in chronic illness—and overconsumption of services by those with chronic illnesses—certainly are contributing factors. This overconsumption of services is due largely to a lack of the kind of expertise and patient education that allied health professionals can effectively provide.

This health care context plus the current emphasis on cost containment create an important opportunity for managed care plans to capitalize on the assets of allied health professionals. HMOs' scale of operation and integrated delivery systems permit the cost-

effective use of allied health clinical specialists. The current focus on disease management, encouraged in part by the introduction of quality measures through the Health Plan Employer Data and Information Set (HEDIS), supports such use, as does increased public understanding of the importance of treating chronic conditions.

Utilization Control

Emerging evidence demonstrates that when allied health professionals are allowed to use critical thinking skills in the application of algorithms, these providers can decrease costs without compromising quality of care or clinical outcomes. Many of the allied health professions have developed practice guidelines that are being used on a national level both to guide physician ordering behavior and to minimize misallocation of procedures. Misallocation of medical care consists of both over-ordering and under-ordering the delivery of services. Effective and efficient delivery of care is also impacted by appropriate sequencing of diagnostic and treatment procedures. Sequencing has a direct effect on the cost of goods and services provided and affects length of stay, patient outcomes, and patient satisfaction (Stoller 1996, 1998).

Reengineering

Since the early 1990s, many attempts have been made to constrain health care spending without compromising the quality of or access to care. Much time, effort, and money has been spent to improve efficiency at the bedside through multiskilling and de-skilling. These tactics have met limited success at best, due in part to a miscalculation of the educational resources required to qualify personnel to provide safe, clinically effective, and medically necessary health care that is accessible and satisfactory to consumers.

Many personnel reengineering efforts involved allied health professionals—in some instances, through downsizing. These experts were simply eliminated in favor of substitutes performing the motor skills involved with a particular clinical intervention. Although personnel budgets were cut, these efforts have failed, by and large, to deliver on their promise to constrain costs. Eliminating professionals with the expertise necessary to avoid misallocation does not save money because utilization of services is not controlled.

Use of Substitutes

Workers who receive limited training on the job without being provided a full educational background—including indications, contraindications, physiologic effect, etc.—are simply not prepared to assist physicians or dentists in modifying orders and care plans commensurate with the patient's condition. Opting for a less-skilled provider receiving lower compensation may appear attractive initially. Any savings derived from lowering costs per procedure, however, may be quickly negated by a higher utilization rate that increases total cost. Misallocation must be targeted.

Patient Education

The education and motivation of the consumer are indispensable components of controlling the use and costs of health care services without degrading the quality of care. Patient education is a cognitive process that also requires affective skills. It is the key to creating a more thoughtful, health conscious, participative health care consumer. It is widely accepted that consumers, especially those with chronic conditions, can positively influence health care resource consumption if they are motivated and are receiving the education necessary to understand their disease, its acute exacerbation triggers, and how to monitor their health status. Additionally, the promotion of wellness and disease prevention to keep people healthy is probably the most effective means of cost containment. In many instances, allied health professionals are well

positioned to provide this indispensable education and to encourage appropriate behavior modification as well as ongoing disease management followup.

Educational Preparation, Research, and Collaboration

Education Reform

The educational preparation of allied health professionals must evolve consistent with the emerging health care delivery system. Just as allied health professionals are expected to expand their role to include consumer education, disease state management, and health promotion, so must allied health educators expand their collaboration and partnering with all stakeholders. Although most allied health schools and programs have mechanisms for feedback from the communities they serve, the current system has tended to be more effective in a stable environment than a dynamic one; allied health educators now face the challenge to be proactive in pursuing changes that serve their constituencies well in a rapidly evolving health care environment. The paradigm has shifted from "wait and treat" to disease state management and health promotion. The new paradigm is to treat and educate community members so as to "anticipate and avoid" the need for more costly health care resource consumption.

Has our education system made this paradigm shift? All health care providers must be prepared to provide expanded services in a variety of environments to consumers who range from the technology-dependent to those with chronic conditions who self-treat but may require periodic assessment and consultation. The National Commission has stated that allied health professionals already own the expertise necessary to provide the highest quality treatment, but they must expand education preparation to include consumer education, wellness programs, and disease state management, all with an eye on appropriate utilization of services. The education system must now encompass efforts to impart the knowledge necessary to enable allied health professionals to contribute in the new roles of demand engineer, patient/consumer educator, disease state manager, and care consultant. The dramatic changes in demographics, technological advances, changes in the occurrence and patterns of disease, and the social context of care must be addressed by educational reformers.

Outcomes Research

Outcomes assessment data on the clinical and cost effectiveness of specific health care practices are urgently needed to guide decision making in today's dynamic, changing health care context. Few data are available, however, on the most effective skill mixes and delivery models for allied health practices—or, indeed, for most other professional practices. If the goal of quality, accessible health care at a reasonable cost is to be realized, credible data on effectiveness must guide future change.

The need for such data is particularly acute in the allied health professions because their contributions—in promoting wellness, educating patients and their families in prevention measures, functioning as disease managers, delivering quality care, and reducing utilization of services—are not widely understood and appreciated. As a result, they may not be integrated most effectively into the new health care delivery models. Given the fact that allied health professionals represent at least half and as much as 60 percent of the health care workforce, failing to use them efficiently could have a significant and detrimental effect on total health care cost as well as on clinical effectiveness.

The Implementation Task Force, pursuant to research recommendations of the National Commission, proposes in this report strategies to overcome obstacles to developing the needed data. These obstacles include a lack of allied health researchers trained in outcomes research; such researchers will be able to provide the data

needed both to increase the efficiency of allied health practices and to validate the effectiveness of those practices for other stakeholders. To develop the requisite research infrastructure and move forward, components of allied health must collaborate to achieve the following:

1. Establish postgraduate training programs in outcomes research.
2. Develop a prioritized research agenda.
3. Develop patient-centered clinical outcomes measures.
4. Promote greater uniformity and outcomes-based criteria in State licensure requirements for allied health professionals.
5. Support studies of the clinical and cost effectiveness of allied health practices.

The Task Force believes that moving forward in these areas will create momentum in the research area and help allied health professions improve their clinical and cost effectiveness, document their value, and make a major contribution to the goal of all stakeholders: improving the efficiency and effectiveness of health care.

Interprofessional Collaboration

The important goals shared by allied health professionals in this era of rapid change in the health care system speak powerfully of the need for interprofessional collaboration. Joint development and action in many areas, not least communication with other health care professions, can help ensure that the cost and quality benefits of appropriate allied health care are key elements of the emerging health care mix.

Many allied health professionals work successfully with physicians, dentists, nurses, payers, and each other. Efforts continue within the allied health community to overcome discipline-specific differences and focus on the many issues common to all of allied health. A major challenge facing efforts to expand collaboration is that the allied health professions are notable for their *unique* expertise. It has been said that the allied health community, when broken down into its components, operates within each component's respective "silo" of education and expertise. While it is true that for the most part each allied health profession is unique, it is also true that the allied health community has a great deal in common. In terms of depth of knowledge, use of practice guidelines, and the utilization gatekeeper role, each allied health profession is generally recognized as the nonphysician expert within its respective domain. These three areas, when combined, can be leveraged to add a fourth: consumer empowerment through education.

Much information continues to emerge about the value of disease state management, health promotion, and consumer empowerment. Interprofessional collaboration is essential if allied health professionals are to influence the shape of the new health care models, assuming appropriate roles and making a maximum contribution to future health care.

Funding Change

Several of the National Commission on Allied Health's 16 recommendations identified the Federal Government as a source for funding to implement these recommendations. In the intervening 3 years, it has become apparent that if the recommendations are to be acted upon, the required funding must come from other sources. These sources should include all stakeholders, not the least of which is the allied health community itself. Other partners are essential, however; the funding necessary to succeed cannot be provided by the allied health community alone. Through the establishment of strategic partnerships, we can undertake the collaborative research and education reform efforts necessary to identify models of service delivery that capitalize fully on the assets of the allied health community. All stakeholders want unrestricted access to quality health care at a reasonable cost. Simply put, we all share the same values. Logic should compel us to develop the partnerships necessary to

realize those values—not just on a short-term, anecdotal basis, but by hardwiring change in the roles and utilization of allied health professionals to assure delivery of optimum services.

Critical Issues and Selected Strategies

The Implementation Task Force undertook a survey by mail of 45 agencies and institutions representing all major stakeholders (identified in Appendix B; respondents listed in Appendix C). The survey instrument (Appendix D) addressed the principal issues identified by the National Commission on Allied Health to determine the current validity of those issues. Nineteen critical issues were identified by survey respondents:

1. Document the value of allied health professionals.
2. Foster efforts to improve the quality and quantity of outcomes research initiatives within the context of allied health.
3. Utilize allied health professionals to their full potential.
4. Recognize allied health professionals for reimbursement in all care settings.
5. Protect the public from incompetent providers.
6. Educate the allied health community about the changes in the health care delivery system.
7. Position the allied health community so it can anticipate changes in the health care delivery system and be better able to influence trends.
8. Increase the involvement of consumers.
9. Position consumers to be more effective in representing the public.
10. Assure quality health care.
11. Document initial and ongoing competency.
12. Increase communication with the health care provider community.
13. Increase public awareness of the value of allied health professionals.
14. Reverse the negative trend at work regarding the quantity and type of clinical affiliates for allied health education programs.
15. Address the challenges manifest with shrinking education resources.
16. Reposition academic programs to meet the needs of the emerging health care delivery system.
17. Identify appropriate groups with which to partner.
18. Support Pell Grant funding.
19. Reauthorize the Higher Education Act.

The foregoing critical issues do not vary substantially from those contained in the National Commission's final report. These issues were considered extensively by the Task Force as it developed its recommended implementation strategies.

The Task Force considered all Commission recommendations related to education reform, outcomes research, and collaboration and developed several implementation plans. The Health Resources Services Administration selected three strategies for funding. HRSA will let three contracts in fiscal year (FY) 1999. After contracts have been awarded, the Task Force and the project officer will monitor the progress of each implementation effort. The strategies selected for funding will address the following needs:

- Collaboration among allied health professions, as well as ongoing collaboration among the allied health community and all major stakeholders.
- Outcomes research workshops for allied health researchers.
- Tools to assist educators in developing cost-benefit analyses for clinical affiliates.

Subsequent chapters of this report present all of the implementation plans developed by the Task Force related to education, research, and collaboration. Detail on each plan's purpose, goals, strategies, and impact is included in the appropriate chapter. Although, as indicated,

some start-up funding is available for three plans, the lion's share of the implementation effort remains unfunded.

The Task Force hopes that the clearly outlined need and projected impact of action will stimulate efforts to embrace these implementation plans. Without movement to act on the National Commission's recommendations, it is not unreasonable to believe that the allied health community and the health care system in general will continue to be frustrated in their efforts to balance the three central health care issues: quality, access, and cost. While we may not know the answer to every question—given the upheaval in the health care delivery system of the past decade—this much is very clear: It is time to partner, to pool resources, and to seek objective evidence regarding education and care provision models that capitalize on the assets of the allied health professional while contributing to high quality, accessible health care at an acceptable cost to a diverse population. Without such a concerted effort, we should expect continued hand-wringing on the part of all stakeholders. Until we are ready to face the hard questions, and to seek objective answers to those questions, we can expect continued erosion of the public's trust in our health care delivery system and an unprecedented cynicism on the part of health care professionals, who are trained to do the best for their patients but are frustrated because of cost reduction imperatives.

Because allied health professionals comprise more than half of the total health care workforce, they represent a critical mass that can have a profound impact on health care access, quality, cost, and diversity. We must fully and appropriately utilize this enormous workforce. Through collaborative research, we can identify optimum use of this national resource; and through education reform, we can assure that all changes aimed at optimum use of the allied health occupations will continue into the future.

The Task Force recognizes that there are tensions within the evolving health care delivery system, caused in part by two contrary trends: the move to "upscale" to include critical thinking, disease management, etc., on the one hand, versus "de-skilling," on the other. These tensions can be resolved only if all stakeholders agree to begin implementation of the Commission's recommendations. Inaction equates with acceptance and perpetuation of the absence of meaningful collaboration between the allied health community and all other stakeholders.

The challenges of the emerging system include not only the need for allied health to improve collaboration both outside and inside the allied health community; we must also involve allied health in efforts to study new approaches to balancing health care access, quality, cost, and diversity. Finally, we must revise education policy to promote more sensitivity to the issue of tying services into provider employer needs in a timely fashion.

This report is organized into three main subject chapters, entitled "Education," "Outcomes Research," and "Collaboration," in addition to the executive summary, this introductory chapter, and five appendixes. Also included is a postscript to bring the reader up to date on three projects related to the National Commission's recommendations that have been undertaken since the Task Force began its work in December 1996. This report represents an enormous amount of work on the part of the Implementation Task Force. In addition, the Task Force received assistance in preparing the report from consultants, professional organizations, and associations. Members of the Task Force acknowledge with gratitude all contributions made by the many individuals and organizations that provided input.

Chapter 2. Education

Purpose

The allied health education system is made up of more than 5,000 programs. These programs graduate over 79,000 students each year (American Medical Association 1998). Due to the large variance in the depth and breadth of various allied health education programs, the Implementation Task Force finds that there is no one education setting that is suitable for all allied health professions. The existing 5,000 programs are based at universities, 2- and 4-year colleges, proprietary schools, and hospitals. This education system represents a tremendous resource to the health care delivery system by providing a skilled health provider workforce.

Few will argue with the premise that the future of allied health care will differ greatly from the present; but the specific future roles, delivery models, and other aspects of allied health services and professionals require study before conclusions can be drawn about the most appropriate profile. It is clear, however, that major system forces currently at work will profoundly influence the allied health professional, and therefore the allied health education system. Also clear are certain basic educational needs.

This chapter is divided into two main sections: "Purpose" provides an overview of the forces shaping change in allied health education and of the issues that need to be addressed by educational reform; "Implementation Plans for Education" presents the strategies selected by the Implementation Task Force to advance education recommendations of the National Commission on Allied Health.

The need for high-quality, low-cost allied health services is well established. Patient care outcomes and cost accountability will continue to grow in value. Based on these criteria, allied health professionals can contribute significantly to more effective use of their services by exploring new roles and influencing changes in the delivery system for health care services. Health services will be based on patient and community needs and must address cultural differences. State regulatory systems will, over time, allow certification of new skills, new competencies, and expanded practice. Indeed, due partly to the advent of telemedicine and telehealth, we are beginning to see much more serious discussion about restructuring the regulatory system for the health care workforce. The current system will give way to a system with greater interstate recognition of competency and credentialing for all health care providers, including allied health professionals.

Allied health professionals can contribute to more effective use of their services by exploring new roles and influencing changes in the delivery system for health care services.

Addressing Diversity and Minority Health and Cultural Issues

Diversity has been discussed for several years; all agree that it is important to have a health care workforce that is culturally diverse and, in effect, provides a mirror image of the populations served. A more diverse allied health workforce will enhance recent efforts in such areas as disease state management, health promotion, and patient/consumer education. The benefits to be gained from diversity are impeded, however, by barriers that hinder recruitment and retention of minority, disadvantaged, and disabled individuals. Private and public initiatives must be developed to prepare diverse allied health

professionals to address minority health and cultural issues in the delivery of health care.

Cost Containment

Changes in the health care delivery system are slowly driving change in educational programs. In some instances, however, the changes brought about by the new system are working at cross purposes to the institutions seeking to better prepare their graduates to contribute optimal ability and utility. For example, substituting less-skilled personnel and downsizing—early reactions to the need to reduce costs—can prove counterproductive.

Provider employers are demanding qualified health care personnel who understand the different corporate cultures of a variety of care settings.

The emphasis on cost containment is one of the most profound changes in the emerging health care delivery system. Educational institutions have been slow to react to this concept, while providers and payers have zealously embraced it. It is essential that all parties work in concert to address the educational and other changes needed to make effective, cost-efficient use of the allied health workforce. One strategy that has been widely adopted to constrain costs is increased use of care settings other than hospitals. It is generally accepted that acute-care facilities are the most expensive care setting in our system. Skilled nursing, subacute, home care, and clinic settings have experienced a dramatic increase in utilization in recent years. Provider employers are demanding qualified health care personnel who understand the different corporate cultures of a variety of care settings.

Training in Diverse Care Settings

The allied health education system is generally organized to provide highly skilled professionals who are equipped to work primarily in hospitals. While there are exceptions, relatively few in the skilled provider workforce (physicians, nurses, allied health professionals) were prepared, as undergraduates, to work in care settings that provide an alternative to hospitals. If allied health professionals are to be utilized effectively, they must have opportunities to receive clinical training in these "new" care settings. Unfortunately, many alternative care settings fail to appreciate the value of establishing clinical affiliations with allied health education programs. It has not been well understood or recognized that costs associated with clinical affiliation, or the lack thereof, take different forms. Many alternative care settings look at the initial costs of clinical affiliation and consider them prohibitive. We are then left with an unmet need. We want the allied health workforce to be as efficient and effective as possible in all care settings. To achieve this goal, the education system must have access to more diverse clinical affiliations than at any time in its history. Yet, given the current era of fiscal belt-tightening, it is extremely difficult for many allied health programs to maintain hospital clinical affiliations, let alone expand those affiliations to home care, skilled nursing, and other settings.

The Task Force believes there is measurable value associated with the partnering of an allied health education program and a clinical affiliate. Some of that value may be represented in direct cost, while other values are more subtle. The Task Force believes, therefore, that a strategy to create an instrument to assist allied health educators in demonstrating the cost benefit of clinical affiliations will prove useful. The Task Force understands the need for cost containment; rather than fight that trend, it proposes to give allied health educators a tool for rationally demonstrating the benefits of clinical affiliations, to support and encourage them in their efforts to establish such affiliations in a variety of settings. The bases for the formation of those partnerships must be the values of the provider institutions.

The Task Force believes there is a measurable value associated with the partnering of an allied health education program and a clinical affiliate.

Core Curriculum

In recommendations made over the years for change in educational preparation for the allied health professions, a core curriculum has been suggested and demonstrated as a strategy for change and integration (Institute of Medicine 1988; O'Neil 1993; Finocchio and Johnson 1995). Finocchio and Johnson define core curriculum as "a set of interdisciplinary courses, clinical training and other educational exposures designed to provide allied health students at each level with the common knowledge, skills and values necessary to perform effectively in the evolving health care workplace." A core curriculum is urged as a means of promoting a generalist practitioner who is prepared to be a member of an interdisciplinary team. A core curriculum would also promote articulation among institutions of higher learning as well as foster career mobility. Ultimately, the outcome would be a multiskilled and more efficient workforce. The National Health Care Skill Standards Project (NHCSSP) can be used as a basis for developing a core curriculum or core curricula for allied health programs. Founded on a solid research base, the standards suggest natural groupings for combining programs or parts of programs (Far West Laboratory for Educational Research and Development 1995).

Education and Training for New Skills

Educational programs for students in the health professions must also change by introducing new subjects and innovative ways to prepare the students to function as members of the health care team. The National Commission reported that curricula need revamping to emphasize prevention, rural and urban health, geriatric health, maternal and child health, and interdisciplinary care delivery. The allied health graduates of the future must possess critical-thinking, decision-making, interpersonal, and information-technology skills at entry level. Beyond entry level, allied health professionals must have increased management skills, communication skills, and advanced clinical competencies, which may include patient-driven protocol implementation, care planning, and disease state management expertise. In order to provide all of this instruction in already-crowded curricula, innovative methods must be employed. Service-learning, cooperative learning, and problem-based learning are all methods that can meet some of these needs (Hallowell 1997).

Disease State Management

Health care should be provided based on the needs of those requiring the care, not on cost or reimbursement considerations. Ultimately, we must empower consumers to take more responsibility for their health. To do this, allied health professionals, including educators, must gain an appreciation of patients' various lifestyles and cultural backgrounds. If we are to succeed in efforts to balance access, quality, the cost of health care, and diversity, we must do better at anticipating and preventing costly clinical events. The entire health care workforce, including allied health, must follow the paradigm shift from "wait and treat" to "anticipate and avoid." Disease state management initiatives have shown promise; while more comprehensive research needs to be undertaken, early results of various disease state management programs are encouraging. Costs have been avoided because the need for treatment has been avoided. Treatment was avoided because a trained health care professional was empowered through education to, among other things, assess a patient's condition, monitor compliance with physician's or dentist's orders, and make recommendations

either to the patient (if within the parameters of a given protocol) or to the physician. Some of these efforts have avoided expensive hospital admissions (McFadden et al. 1995). Success in this endeavor cannot be achieved, however, without the requisite critical thinking and communication skills on the part of the health care professional and alignment with reimbursement incentives. Success will also be elusive without an understanding of the culturally diverse patient (Fuller 1994).

We must do better at anticipating and preventing costly clinical events; we must follow the paradigm shift from "wait and treat" to "anticipate and avoid."

Educating Patients and Families

One of the best strategies at work today to contain the cost of health care is patient empowerment. Patients with chronic diseases can be taught about their disease and their treatment regimen. Family caregivers can also be instructed to monitor compliance when practical to do so. Patients who avoid unhealthy behaviors can decrease consumption of health care resources. It is also generally understood that patients who comply with physician orders tend to make fewer physician office visits and emergency department visits and are admitted to the hospital at a lower rate (Rich 1995).

Allied health professionals need to be prepared to fulfill the role of patient educator. To succeed in this endeavor, we must modify current curricula to include behavior modification, communication, skills building, and patient and family education. Many in allied health are currently contributing to patient education; but adding these skills to upwards of a million allied health professionals would create far greater access to these needed services, adding substantially to the efforts of physicians and nurses. In many instances the allied health professional has more time to devote to this activity and has more frequent contact with the patient, making patient and family understanding of the medical situation more likely.

Recruiting Students

To ensure a constant supply of qualified allied health professionals, a mechanism to establish and maintain a cohesive recruiting system must be established. Recruitment of students into allied health professions should begin at a young age, perhaps even before high school. Tours, buddy systems, school demonstrations, and career days are examples of activities that can introduce students to allied health programs (Mishoe et al. 1993). A 1992 survey conducted in New Jersey and involving 140 allied health program directors affirms the potential value of such activities. Survey respondents indicated that early exposure to allied health fields can be effective in identifying elementary, junior high school, and high school students who are strong academically and who may be interested in allied health careers (Maillet and Anesetti 1993). Another New Jersey survey asked high school seniors about factors governing their choice of careers. Most indicated that personal satisfaction, employment opportunities, and income were the most important factors. Although more than 75 percent of the respondents had a favorable impression of allied health, only 15 percent indicated that they were very familiar with the allied health professions. One could conclude, therefore, that it is not a lack of interest in allied health that causes enrollment vacancies, but rather a lack of knowledge about the allied health professions.

We sometimes pay for this lack of knowledge by experiencing shortages of certain allied health professionals. Given the fact that human resources comprise one of the major cost components associated with health care, cost containment efforts can be adversely affected by the periodic scarcity (and consequent higher cost)

of human resources. Such shortages work against all other efforts to provide access to quality health care at an acceptable cost. To conduct the educational work necessary to inform and recruit students, linkages are needed between allied health professions, elementary and high schools, and colleges.

In a relevant undertaking, the National Consortium on Health Science and Technology Education (NCHSTE) has proposed the establishment of a Health Science Building Linkages Career Path Project to help students at every level understand the connections between what they learn in school and what they will do in the workforce. A principal purpose of the project is to help students understand all of the opportunities available to them in health care as they begin to consider various careers. Each activity of the project is based on national standards in science, mathematics, language arts, health science, social science, physical education, and health care. The project requires the establishment of partnerships across the school setting and beyond: among the K–12 system, higher education, and the health care industry (NCHSTE 1998).

Recruitment of students into allied health professions should begin at a young age, perhaps even before high school.

In 1989, the Institute of Medicine (IOM) published a study stating that linkages between colleges and high schools are playing an increasingly important role in encouraging the educational preparation of allied health professionals. Linkages appear to work well when there is mutual benefit and shared commitment, regardless of whether the arrangement is formal or informal (IOM 1989).

Linking 2- and 4-Year Institutions

Linkages between community colleges and 4-year institutions have presented some difficulties for allied health education. One of the reasons 2- and 4-year colleges have difficulty collaborating is that the research orientation of 4-year colleges may conflict with the pedagogical interests of 2-year colleges. Four-year colleges have a select set of courses required for graduation and may refuse to offer credit for essentially the same course provided by a 2-year college. University faculty contend that many courses offered by 2-year colleges are less thorough than comparable courses taught in the first 2 years of a baccalaureate program. Two-year colleges believe their exclusive teaching mission allows them to thoroughly prepare students for upper division work. Conversely, university faculty believe that, because of 2-year colleges' open-door policies and remedial programs, some courses are simplified or watered down (Barry and Barry 1993).

Finally, it must be noted that when graduates of health career programs of 2-year colleges pursue baccalaureate degrees, they frequently find that their technical course work does not transfer—even though the technical course work is often as demanding as upper division graduate work at 4-year colleges (Rensch 1994; Council for Allied Health in North Carolina 1994). This situation creates problems in designing career ladders for the allied health professions, which are further compounded by the lack of interdisciplinary course work at either level.

Several initiatives are under way to assist in solving the articulation problem. They include program-specific 2+2 agreements, systemwide consortium agreements, and dual admissions. The 2+2 program agreements usually refer to a standard set of mutually agreed upon courses that are completed at the 2-year college and then transferred as a group to the 4-year college. Consortium agreements require specific, well-defined goals, strong support from high-level administrators, adequate funding, and an overall program director who must communicate effectively with each institution. Dual-admission articulation arrangements protect the integrity of the associate degree yet ensure that the 2-year

college transfer student will receive predictable, consistent, and equitable treatment from the 4-year institution. The student who applies to a 2-year college and agrees to take a specific set of courses can be simultaneously admitted to a 4-year institution (Rensch 1994).

Increasing Diversity

Racial and cultural minorities, as well as the disadvantaged and the disabled, should achieve representation in allied health education, practice, and leadership that reflects the demographics of our society.

African Americans, Hispanics, Native Americans, Alaska Natives, Asian and Pacific Islanders, and other racial and cultural minorities, as well as the disadvantaged and the disabled, should achieve representation in allied health education, practice, and leadership that reflects the demographics of our society. In order to make this possible, educational institutions must undertake collaborative efforts to gain support to establish elementary and secondary programs that provide early exposure for minorities, the disadvantaged, and disabled Americans. The allied health education community must work with foundations and other organizations to develop an education and practice agenda for achieving increased representation in allied health for minorities, the disadvantaged, and the disabled.

Collaborating on Education Reform

Clearly, the allied health education system must change if it is to produce allied health professionals who can work across all care settings; provide treatment, education, and consultation; and assist in controlling the demand for services, thus containing costs. Asthma provides a good example of the kinds of services they must be prepared to furnish. Kaiser Permanente in northern California was one of the first managed care plans to focus on pediatric asthma. Cost was an overriding consideration when employers noted that employees were missing work to take their children to the hospital for care or admission. Student grades suffered as a result of absenteeism due to illness. By establishing interdisciplinary teams that focused on teaching the child and the family how to manage the disease, hospital admissions were reduced and absenteeism from school and work was substantially curtailed (England 1997).

Despite such evidence, it is still very difficult to bring about change. The barriers identified in the National Commission's report include inflexible curricula, accreditation standards, licensure requirements, degree requirements, and disciplinary boundaries. These barriers must be removed through collaboration with employers, insurance companies, State licensing agencies, accrediting bodies, professional associations, the public, and other consumers.

The current state of practice is a reflection of the old health care delivery system, partly because of the slow pace of educational reform, and partly because allied health professionals have not been involved in the decision-making process for health care reform. As the health care delivery system evolves, so should the roles of allied health professionals. The allied health education system must enable these professionals to expand beyond the "wait and treat" paradigm. The system must prepare students to work in a multitude of settings, where they will encounter patients at every stop across the continuum of care. Education reform must be undertaken, therefore, not just by educators and the allied health professions, but by a group representing all major stakeholders. The overarching goal uniting all stakeholders must be to prepare allied health professionals to provide a wide range of services in such a way as to optimize access to needed services, provide positive clinical outcomes, and maintain cost-effectiveness.

Implementation Plans for Education

Plan: Increase access to appropriate clinical education sites by developing means of identifying the cost and other benefits of serving as a site.

NCAH recommendation addressed:

Recommendation 11. Allied Health educational programs at all levels and in all settings should collaborate with each other and with other health professions to create a broader and more effective educational system. The development of partnerships within educational institutions and with the health services industry should prepare practitioners to meet workforce demands and maximize resources.

Purpose of Plan

The access to appropriate clinical education sites must be addressed to assure the continued quality of education for allied health professionals. Now that the health care system has evolved from primarily an acute-care focus to include the community-based care settings (ambulatory care, home health care, long-term care facilities), clinical education sites must be expanded to include such facilities. Major reports on health care reform call for clinical education in these settings (Pew Health Professions Commission 1995). However, these partnerships have been slow in developing. In fact, a number of constraints have resulted in a decrease in available clinical education sites. These constraints include the following:

- Concern about the financial impact of providing educational training in the health care setting has resulted in fewer education sites. Reasons for the reduction are not only that delivery of care is the primary mission of the sites, but also that the benefits—to the health care delivery system as well as to allied health professionals—of education in the clinical sites have not been delineated.
- Reduction of funding to institutions for health care training has decreased incentives to accept students.
- Reengineering and downsizing have decreased clinical staff flexibility to participate in the educational process. A process must be developed to make clinical education needs and new staffing models compatible.
- State boards or accrediting bodies mandate the amount and type of clinical experiences required for a sanctioned level of competence. These mandates have not been modified to reflect the changes in health care delivery settings. For many professional areas, the curriculum still includes only components offered in limited health care settings, primarily hospitals. A decrease in specialized clinical settings for education has led to an increased demand for educational programs at these limited settings.

The benefits and cost-effectiveness of serving as a clinical education center—not only to the provider, but also to the educational system—must be identified and communicated. Partnerships should be developed within the allied health community to address this need.

The benefits and cost-effectiveness of serving as a clinical education center must be identified and communicated.

The partnerships should include multiple disciplines, payers, providers, and accrediting bodies. Such collaborative action, as proposed in this plan, will produce a document that will identify the need for and support the use of all types of health care providers for clinical education.

Since a variety of clinical experiences are required by licensing boards and accrediting agencies, the educational programs are required

to utilize these resources. The tangible benefits to the clinical agencies who provide the clinical practice experiences need to be highlighted. In addition, there are intangible benefits that must be enumerated. The contract to be let based on this implementation plan will identify those benefits and develop a model for assessing their validity in specific cases. This model could be used by all allied health disciplines or schools as they conduct studies in their community to document benefits.

Other reports have identified the importance of strengthening the tie between community-based practice and education. For health care education to be most effective, the skills taught and practiced must more closely emulate the desired work-skill set. This can only be accomplished if the employers and educators collaborate to enhance clinical education opportunities. Program standards, accreditation issues, and clinical access must all be reviewed to support an effective, appropriate clinical education system that meets current and projected education needs. The current emphasis on cost requires that a tool to validate the benefits of serving as a clinical education site be developed and provided to potential partners in clinical education.

Goals of Plan

1. Identify or develop models of prototypes that have been used and can be used in the future to develop collaboration efforts between employers, professional organizations (at least two disciplines), health care industry partners (e.g., health systems or plans), and educational program representatives.
2. Establish a focus group representing all principal stakeholders to collect information for and create a representative model that can be used by educators and employers to consider the cost and benefits of the use of various clinical sites by education programs. The focus group shall include one representative from employers, one from each accrediting agency, one from each professional organization under study, and a member of the Task Force. The model they create will be considered a pilot, with input from the employers and the respective professions, and will serve as a model for further study. It is anticipated that this project will require two meetings of the focus group and at least two conference calls.
3. Include in the model measures to assess such values as decreased cost of recruitment, reduced turnover of employees, increased patient satisfaction, reduced employee frustration during the first year of employment, and less need for employee training programs. Models that have been used in the past have addressed these issues, but none are available that reflect the multidisciplinary approach needed to address the issues facing the system today. The focus group must collect those models used in the past and adapt them to address the constraints in today's environment.
4. Recommend other mechanisms for attaining the clinical practice skills necessary in the work environment today.
5. Identify methods to measure the direct and indirect costs of student education.
6. Summarize the information collected in a final report. Identify the following in the report:
   - Benefits of serving as a clinical education site.
   - Variable overhead costs for different types of clinical sites (e.g., acute care, long-term care, home health), substitute experiences (simulations), or modifications to didactic and laboratory training necessary to facilitate entry into the clinical setting.
   - Level of student skills desired for access to the clinical sites.

Implementation Plan

1. Review the literature for previous studies on the cost of clinical education; use that

information to develop models for measurement that include the constraints to educational programs and health care facilities today.

2. Identify and consult with a representative group of employers—including managed care organizations, long-term acute care facilities, community health centers, and home health agencies—to address the issue of the skills mix needed by allied health students when they enter the workforce.
3. Identify and consult with a representative group of at least eight individuals from educational institutions and allied health professions, representing certificate, 2-year, 4-year, and graduate programs, to identify the most prevalent benefits of student internships.
4. Contact a representative sample of allied health professional organizations to determine if information is available about the value to the clinical site of hosting an education program.
5. Develop a model for use by educational programs to document the cost benefit of serving as a clinical education site.
6. Assess the appropriateness of the model by seeking input from the professional community and employer consultants.

It is anticipated that the time line for the project will be as follows, measured from the beginning of the project:

- 3 months: focus group developed
- 9 months: information collected and responses reviewed
- ? months: summary and a final report completed

Impact of Plan

These models and documentation can be used to develop partnerships between the educational institutions and the health services industry to meet new educational needs and workforce demands in an effort to maximize resources. The end product of this plan (and of the contract that resulted from it) will be a document that includes a list of benefits associated with serving as a clinical education center and a mechanism for determining the cost-benefit analysis, which will be used to assist the educational institutions. The projected long-term impact will be to meet the needs of the health care workforce by developing a better-prepared health care worker, and to validate for the providers the real cost of supporting the educational process for health care workers.

Plan: Develop and promote models for increasing diversity in allied health education programs.

NCAH recommendation addressed:

Recommendation 3. As a matter of priority, care should be taken to attain representation that better reflects the populations served by allied health providers. If the goal is optimal delivery of care, relevant and accessible education, and performance of high-quality research, every part of the system must speak to the consumer.

Purpose of Plan

Current enrollments across the allied health professions do not reflect the diversity of the population served. In 1988, the *Sixth Report to the President and Congress on the Status of Health Personnel in the United States* (USDHHS 1988) identified a misrepresentation of blacks, Hispanics, and Native Americans in health care fields. This report further predicted a continuing shortage of these minorities, yet little has been done in the past 10 years to achieve a balance in allied health. Subsequent reports (1990, 1992) confirmed that this trend had not improved, but instead had worsened as the population served included increasing numbers of the members of these groups (USDHHS 1990, 1992).

Diversity in the field of health care has been an issue for many years and will continue to worsen

if active steps are not taken to resolve the issues. The problem is less severe in allied health than in other health professions. However, the numbers still do not represent the community of the individuals served. While specific programs to remedy the imbalance have operated at various schools, there has been no unified effort to date on the part of the allied health community to achieve diversity in that area of health care. Since allied health includes multiple disciplines, it is very likely that this issue will not be addressed unless there is action to bring the stakeholders to the table specifically to discuss lack of diversity issues.

Achieving diversity should be a goal for the allied health professions as well as the educational programs for those disciplines. More colleges and universities with predominantly minority student bodies must begin to incorporate allied health studies into their curriculum. Only 2.7 percent of these institutions offer allied health programs. In addition, initiatives such as "Tech Prep" and "Building Linkages" should be expanded in areas with large minority and disabled populations. These programs must be carefully integrated into the existing allied health programs. To better meet the needs of the community and of the individuals seeking care, the background of the health care workforce should be similar to that of the clients. Efforts to recruit into the health care field those individuals who live in the communities of greatest needs should be addressed in a coordinated manner at a national level and instituted at the local level in the university and college programs.

Goals of Plan

1. Create a forum for discussion of existing successful models for creating the appropriate diversity mix in current allied health programs in the 2- and 4-year academic programs.
2. Identify the resources for and constraints of achieving diversity at the 2- and 4-year academic institutions.
3. Communicate to the health education community the recommended action for advancing diversity in allied health.

Implementation Plan

1. Bring together representatives from the 2- and 4-year college programs to work in concert to address the issue of diversity as it relates to the allied health programs within the constraints of those institutions.
2. Collect existing models and use them to develop models that are part of a coordinated approach, for use by institutions in the allied health educational arena in the effort to increase diversity among entering students.
3. Incorporate recruitment, admission, matriculation, graduation, and placement of minority students as the models are developed.
4. Join with ongoing needs assessment projects for allied health professions—such as those being conducted in South Carolina, Texas, and Maine—in an expanded project to address the entire country in terms of needs and diversity. The outcomes of these projects were to include restructuring of health professions programs as necessary to (a) produce graduates with a mix of needed skills and competencies, (b) define a funding mechanism to move toward an academic program mix that will produce graduates with an appropriate mix of competencies and skills, (c) promote development of a workforce more reflective of the ethnic and cultural mix of the population, and (d) establish a lasting consortium to link academic programs with communities to produce health in the State.

If item 4 above is conducted jointly with the existing pilot projects, this implementation plan could be completed within 1 year and publicized and distributed to 2- and 4-year academic programs for allied health.

Impact of Plan

Educating the public about allied health professions is critical to increasing diversity. Many of those in the community who are selecting health care as a career do not know about the various professions of allied health. In order to effectively address the issue of diversity, we must begin to educate the community about allied health and its important role in health care. Another issue to be addressed is development of workforce needs data, including the appropriate diversity mix for different areas of the country. Finally, documenting the benefits of diversity through a comparison of outcomes (patient satisfaction, compliance, and reduced length of illness) using (1) the current health care workforce and (2) an appropriately diverse health care workforce would provide a powerful tool for influencing educators, providers, and potential students to actively support greater diversity. Implementing all of the strategies outlined in this plan will have a significant impact, over time, on diversity in the allied health professions.

Plan: Define appropriate scopes of practice for allied health professions.

NCAH recommendations addressed:

Recommendation 5. Allied health professionals, other members of the health care team, and health care management should collaborate to foster understanding and appreciation of one another's unique and collective interests and capabilities.

Recommendation 6. Professional associations, credentialing agencies, accrediting agencies, payers, consumer groups, and government should undertake efforts to reduce existing barriers to clinically effective and cost-efficient scopes of practice for those whose scope of training currently exceeds their scope of practice and for those who add new or multiple competencies in the future.

Recommendation 7. As is the case for all health professions, the provision and financing of services furnished by allied health professionals should be based on objective and scientific information that validates the clinical effectiveness and cost efficiency of service delivery models.

Purpose of Plan

A current imperative of the health industry is to manage more illness with fewer resources, while promoting wellness and prevention. One result of these pressures—and a major issue facing health care—is that some workers are being asked to perform tasks for which they have no education or experience, while others who have the appropriate education are underutilized in the health care setting. The allied health professions can meet the criteria to provide the high-quality, low-cost services demanded in today's environment. Many of the skills desired in the health care arena today are taught in allied health curricula. Unfortunately, so little is known by the public and the payers about the allied health fields that employers are often unaware of the abilities of these professionals in specific health care fields. Informed and coordinated planning is essential as future changes occur in health care. Without involving all parties in the process, the efficiency of allied health education may decline. Allied health educational systems must collaborate with the key stakeholders (employers, insurance companies, State licensing agencies, accrediting bodies, professional associations, the public, and other consumers) to create educational offerings that are responsive to the needs of the emerging health care system—and to revise educational preparation and continuing education programs to promote multicompetent health professionals.

Allied health professionals must change the way they view themselves and what they consider to be within their scope of practice. At the same time, employers of those individuals must have input to the educational process so that the employee will be able to function at the desired level. The Education Committee of the National Commission on Allied Health reported,

"Even though the allied health education system comprises over 4,000 active programs and annually graduates over 100,000 students in programs based in hospitals, in 2- and 4-year colleges, and in universities, little has been done to better understand and mobilize this tremendous resource. A more complete understanding of the current as well as future potential of allied health education is a critical first step in addressing market needs for access, quality, and cost containment."

The ability of allied health professionals to deliver a wide range of health care has long been overlooked. While allied health professionals are essential players in hospitals and outpatient facilities, the core skills of these individuals in the various disciplines are often not well known to the public, other health care workers, and those who purchase the services they can provide. As a result, they are greatly underutilized. In many cases, skill mixes of allied health practitioners could be incorporated into other professional categories, yet barriers to such change have not been challenged. Failure to act on these recommendations from the National Commission on Allied Health will result in an ineffective, inappropriate, and costly health care delivery system.

Goals of Plan

1. Conduct a formal study involving payers, providers, educators, and the professions to determine the most efficacious mix of skills for each allied health profession. The stakeholders should make these determinations collaboratively so as to remove existing barriers to communication and understanding between employers, educators, and the professions. This strategy would result in a determination of the effectiveness both of the current skill mix for allied health professionals and of an expanded skill mix and would identify those skills that are appropriate to a certain level of the practitioner.
2. Produce, as an end product, a more efficient health care workforce with a higher level of skill and no sacrifice in quality of care. Barriers and turf issues will be addressed, and the appropriate scopes of practice and levels of health care delivery will be determined. Education will become more efficient and allied health professionals will be fully used to assure high-quality, low-cost health care.

Implementation Plan

1. Collect the scopes of practice for all allied health disciplines, nursing, and pharmacy and consider those along with the skills typically considered to be those of the physician or dentist.
2. Develop a model to compare and contrast various skill mixes of allied health professionals. A representative group of payers, employers, educators, professions, and accreditors must be involved in the process.
3. Recommend skill expansions where appropriate to further enhance the value of the allied health worker and increase the cost-effectiveness of providing higher quality and lower cost health care.
4. Make recommendations to allied health educators, legislators, and State regulatory bodies concerning the need to educate and retrain allied health professionals so that health care provision will be as efficient and efficacious as possible.

Impact of Plan

Implementing this plan will address the critical issue of defining the appropriate skill mix for allied health professionals and the appropriate educational level for that mix. The project will also address relevant curriculum, licensing, accreditation, and turf issues and will identify the skill mix desired by the employers of allied health personnel. Changing curricula typically is a slow process. Implementing this plan will require

collaboration and understanding, but the result will be a more effective and efficient educational process and health care system.

Plan: Establish core competencies of allied health.

NCAH recommendations addressed:

Recommendation 5. Allied health professionals, other members of the health care team, and health care management should collaborate to foster understanding and appreciation of one another's unique and collective interests and capabilities.

Recommendation 6. Professional associations, credentialing agencies, accrediting agencies, payers, consumer groups, and government should undertake efforts to reduce existing barriers to clinically effective and cost-efficient scopes of practice for those whose scope of training currently exceeds their scope of practice and for those who add new or multiple competencies in the future.

Purpose of Plan

Without a major effort to effect changes in the delivery of allied health curricula, professional groups will not advance rapidly, if ever, toward needed integration of allied health disciplines. Changing the educational and accreditation processes is slow at best; implementing this plan to define and establish core competencies will facilitate such efforts and produce change more rapidly. Many skills currently are taught to all allied health professionals. In many cases these skills are, or should be, generic to all health care workers. Identifying these skills and collaborating across professions to establish core competencies will increase the efficiency of educational delivery—and help ensure appropriate training for future needs.

Barriers that prevent crossing professional boundaries and foster opposition to change would be greatly reduced if those who feel threatened could participate in the development of curriculum changes; they would realize they can benefit from sharing those portions of the curriculum where there is overlap without losing professional autonomy. The barriers must be removed if health practice and education are to change to meet the new demands for both efficiency and effectiveness. Undertaking a true collaborative effort to identify core skills will focus attention on the need for reform in educational and professional boundaries and advance productive change.

Recommendations 5 and 6 from the National Commission call for collaboration among allied health professions and more efficient delivery of the educational programs for the disciplines of allied health. Collaboration has been hampered by barriers between credentialing, licensing, and accrediting bodies as well as between professional groups, in the form of turf battles. It has been suggested that allied health professions must strive to "up-skill" themselves. There has been no action on this suggestion, however. Certain skills in each profession are universal (i.e., common to all the professions), some are shared by some professions, and some are unique to one profession. This project would bring all of the universal skill sets together and begin the process of moving toward a more responsive workforce. Success in this effort requires representation from all professional groups, and open communication and sharing. Recommendations from the Pew Commission and, subsequent to that, from Far West Laboratories have included models for clustering of allied health professions. These models have been accepted by some of the stakeholders, but there has been little action to move them forward and increase acceptance within the various disciplines. These models have not addressed the issues of licensing and certification.

Goals of Plan

1. Advance the previous work of Far West Laboratories and the National Committee on

Health Science and Education Technology on better preparing the allied health professions.

2. Identify those skills that are generic to all allied health professional curricula.
3. Encourage collaboration among the stakeholders of the health care system in identifying and establishing core competencies.
4. Create a more efficient method of educational delivery and a more acceptable graduate for the workforce.

Implementation Plan

1. Collect information from the professional organizations on the scopes of practice.
2. Review and integrate the materials, along with the materials developed through the Far West Laboratories and Pew Commission, into a single plan of core education for the 2- and 4-year programs.
3. Conduct a roundtable of stakeholders to review the document and recommend appropriate action.
4. Encourage the Health Care Financing Administration to incorporate the skill mix information into the reimbursement programs they coordinate.
5. Publicize the document to the education, accreditation, credentialing, and employment bodies for their use.

Materials developed through the Pew Commission and Far West Laboratories have promise for creating a less barrier-driven system in terms of skill mix and efficiency of delivery, yet no pilots have been conducted. These plans also have not been used to address the issues of credentialing, accreditation, licensing, and professional boundaries. This project would not only promote coordination and collaboration, but would also incorporate into planning the payers of the health care system and a more diverse representation of the allied health professions.

Impact of Plan

All of the issues surrounding scopes of practice, turf, and licensing will be addressed as the project develops. This plan will advance the revision of accreditation standards and professional curricula to meet the demands of the core concept. While much of the groundwork has been completed for such a project, the key to acceptance will be early participation by the professional organizations involved in the changes. Implementation of this plan will encourage employers to begin to fully utilize the core of knowledge that allied health professionals possess and to realize that an expansion of this knowledge is within reach.

Chapter 3. Outcomes Research

Purpose

Allied health providers are the largest and most diverse group among the health care professions, representing approximately 50 to 60 percent of the total health care workforce (O'Neil 1993). Economic and consumer pressures to provide cost-effective, quality health care services, as well as an aging population requiring home care and extended care, will increase the demand for allied health staff. Conversely, uninformed or shortsighted cost-cutting measures could delay or prevent appropriate use of this workforce. As with nearly all health professions, few data are available to document the added benefits that allied health personnel contribute in terms of quality, cost-effectiveness, and access to health care (Barr 1993). This deficiency is due, in part, to the lack of outcomes assessment data and the lack of training for allied health professionals to perform outcomes research.

Obstacles to obtaining the needed data include both the way allied health services are organized in the treatment setting and the organization of allied health training programs. Most allied health providers practice as part of a multi-disciplinary team providing a number of therapies. Isolating the contributions of each team member to the well-being of the patient, for assessment purposes, is difficult. Furthermore, there is little opportunity for health services researchers to interact with allied health providers; and few allied health education programs include matters germane to outcomes research (Benjamin 1995). This section of Chapter 3 summarizes the need for assessment data on allied health services, the types of research needed, and the obstacles to be overcome; the last section of the chapter, "Implementation Plans for Outcomes Research," presents the strategies selected by the Implementation Task Force to advance the research needed as an objective foundation for future change.

There is an overwhelming need for a prioritized research agenda and for quality research, particularly outcomes assessment research (Barr 1995). This need is predicated on two imperatives, one societal and the other individual. From the societal standpoint, the need is economic: the requirement to develop a more cost-effective national health care system. From an individual standpoint, the need is to factor into care-delivery models the patient's assessment of the clinical effectiveness of treatments and interventions. In order to address the need for outcomes assessment, allied health disciplines must build an infrastructure for research by strengthening the research orientation of graduate programs targeting the practitioner. Additionally, the establishment of researcher mentorships will ensure the continuity of the programs.

Few data are available to document the added benefits that allied health personnel contribute in terms of quality, cost-effectiveness, and access to health care.

As noted in the recommendations of the National Commission on Allied Health (NCAH), provision and financing of services furnished by allied health professionals must be based on objective, scientific information that validates the clinical effectiveness and cost efficiency of service delivery models. Without quality outcomes assessment data and reliable, research-based support for the cost- and care-effective contributions of allied health professionals, these disciplines cannot realize their enormous potential to promote quality care at an affordable cost to patients as rapid change continues in the health care system.

The National Commission identified several assumptions related to research that are still

useful. Three of those assumptions are especially noteworthy (U.S. Department of Health and Human Services [DHHS] 1995):

1. Payers of health care expenses such as large managed care organizations, employers, and insurers will shape future clinical practice.
2. Payers will use cost as the primary measure to determine practice. Although quality issues will exert some pressure patterns, costs will remain the main driving force of practice decisions.
3. Determination of clinical effectiveness and outcomes assessment will drive payment and practice decisions which currently tend to be based solely on cost.

Although it has been 3 years since the National Commission published its report, these assumptions seem to be alive and well. All stakeholders, from consumers to providers and payers, want reimbursement decisions to be based on effectiveness. However, a very small amount of funding is available to conduct outcomes research, especially if that research relates to allied health. Yet the guidance needed to optimize cost constraint without compromising the quality of allied health clinical services must originate from objective evidence relating to outcomes for clinical effectiveness. Clearly, obtaining such evidence will require collaborative effort—a meaningful partnership of all stakeholders. However, even if such a partnership were in place, are there enough allied health researchers available to participate in studies of both profession-specific and collective contributions of allied health professionals? The establishment of postgraduate training programs in health services research is essential. Researchers who understand the clinical practice of various health disciplines and are capable of integrating those perspectives into outcomes studies are vital (Benjamin 1995).

Research will enable us to factor into care-delivery models the patient's assessment of the clinical effectiveness of treatments and interventions.

Type of Research Needed

Research documenting the contributions of component groups of allied health professionals is desperately needed. This type of research will focus on outcomes—essentially, effectiveness research. When is it appropriate to employ the services of an allied health worker? What is the impact of using allied health practitioners on the cost, quality, and accessibility of health care? What are the effects on patient outcomes of substituting less-skilled workers? What are the safety implications of using substitutes? How are allied health services provided? What is the impact of disease management programs utilizing allied health practitioners? One basic requirement for future research is to develop a patient-centered rather than profession-centered evaluation language that includes patient-related outcomes measures and accompanying assessments of their validity and reliability.

Allied health outcomes research should seek to measure outcomes that are unique to a specific allied health profession, but additional efforts should address the collective contributions of the allied health professional community. Currently, relatively little outcomes research exists in the context of allied health. Future research efforts could act as a catalyst for change toward a more effective, efficient, and accessible health care delivery system—particularly since most allied health practices are folded into the classic comprehensive approach to the treatment of most clinical conditions.

Allied Health Effectiveness

The allied health community must view outcomes research not only as a way to document

performance, but also as a way to discover opportunities for improving its effectiveness. By examining the effectiveness of service provided by allied health professionals, we can identify the most cost-efficient methods available to deliver care. By sheer weight of numbers, the services these professionals provide must account for a substantial segment of this country's health care expenditures. When outcomes research efforts are undertaken on a much broader scale than at present, the health care delivery system and all its stakeholders will make further progress toward the goal of providing accessible health care services of high quality and acceptable cost.

Allied health professionals are well-positioned to provide curative, rehabilitative, and primary health care services. These professionals possess an in-depth knowledge of all clinical interventions and services provided in their specialty areas. Thus, they are experts who can add incremental value in the emerging health care delivery system. They promote wellness through preventive practices, they can function as disease managers across the continuum of care, they can deliver high quality care, and through their educational efforts they can empower patients and family caregivers.

Provision and financing of allied health services must be based on objective, scientific information that validates the clinical effectiveness and cost efficiency of service delivery models.

But this cannot be accomplished without an objective, scientific basis for decision making by both practitioners and those who determine the makeup of care teams. Are our service delivery models as efficient and as effective as possible? Are the skill mixes that reside within all health care provider professions consistent with the goals of high quality, accessible, cost-effective care? Are the appropriate allied health care workers involved in the treatment plan? How does the utilization of allied health personnel affect the quality of and access to care? Is the safety of patients being compromised by employing less-skilled personnel in the treatment plan? How and where are health care services provided? Answers to these questions and many more must be sought through well-designed outcomes research efforts. Successful efforts must include allied health researchers as well as representatives of other components of the health care delivery system. The National Commission and the Task Force believe that more innovative, efficient, and effective utilization of allied health professionals will dramatically decrease the cost of care while increasing access and assuring a quality safety net for consumers.

Delivery models are changing, and existing anecdotal information encourages further research. Many innovative delivery models are being developed at the local level (Perry, Freed, and Kushman 1994). For these efforts to obtain national credibility, they must be studied on a national level using generally accepted methodologies. Even though outcomes assessment is relatively new, most agree that it can drive decision making about appropriate care. Allied health researchers can contribute if they obtain expertise in outcomes or effectiveness research.

The private sector has shown substantial interest in outcomes research, yet collaboration between the allied health professions and these potential partners has been limited. It is ironic that medicine, which is most often associated with the treatment of pathology, has received a great deal of attention, while allied health providers, who focus on the elimination or amelioration of impairment or disability after the physician has eliminated or ameliorated the disease, have been given short shrift. Managed care organizations focus on the appropriateness of care and want medical decisions to be driven by practice guidelines. In recent years, several allied health professions have developed practice guidelines that have contributed to more effective utilization of services, yet the contributions of the allied health professions are vastly underappreciated in the outcomes research arena.

Outcomes Researchers

The reason for this underappreciation of allied health in the outcomes research community can be traced to the fact that the allied health professions do not possess a critical mass of outcomes researchers (Benjamin 1995). The problem lies in the commitment of allied health educators to prepare practitioners with strong clinical skills. Few of the limited resources available for education are devoted to the development of research skills or to the requisite social sciences for this type of research. The allied health professions, like medicine, nursing, and others, have prepared persons to conduct basic science and clinical efficacy research, but relatively few are skilled in effectiveness research. There is no question that the supply of allied health researchers does not meet current demand.

The National Commission reported that there has been virtually no concerted effort to advance the role of research related to allied health practices. Despite increased awareness of the importance of outcomes assessment in most of the allied health professions (Ohman 1995), there seems to be a disconnect between recognizing the importance of such efforts and the ability to follow through. This disconnect is due in large part to the fact that not all allied health professional researchers are facile in the design and implementation of scientific investigations related to effectiveness research.

The Commission and the Task Force recognize that there is a general shortage of allied health practitioners holding graduate degrees with a research orientation who could serve as faculty and mentors for practitioners entering the professions. It is also recognized that research efforts should be tied to improving the efficiency and effectiveness of allied health services. The roles of allied health professionals continue to evolve, but within the context of health services delivery teams. Allied health professionals are currently being educated in a discipline-specific environment. Indeed, their roles are defined by a discipline-specific professional code of ethics. It follows, therefore, that their research is conducted from a discipline-specific perspective, with much of it concentrated in the educational preparation of allied health workers. Although there is a need for such discipline-specific activity, we must also recognize that the allied health professions are a component of a much larger system. To bring about true synergy, it is essential that we develop a core group of allied health researchers who can undertake outcomes research efforts that include a cross-disciplinary component incorporating patient-centered outcome assessments.

There is no question that the supply of allied health researchers does not meet current demand.

As an interim measure, before a cadre of allied health professionals possessing the proper research degrees and skills is developed, we should link allied health practitioners with graduate students, forming mentoring partnerships to develop effectiveness research expertise.

While the emerging model of care delivery is establishing new requirements, the current academic structure helps produce behaviors that may be inefficient or impede a person's ability to adapt to the demands of the evolving health care delivery system. One of the biggest challenges facing the allied health community is to eliminate obstacles, such as the lack of a common definition for *outcomes measures*, that stand in the way of the successful application of clinical and health services research. When these barriers are eliminated, we will be better positioned to assure that allied health education and clinical practice are tied to the values of the emerging health care delivery system.

Allied Health Research Agenda

The ongoing change in the Nation's health care delivery system is driven more by concerns over the cost of care than the quality of care. Utilization of allied health professionals based on

effectiveness research will lead to a better, more balanced and productive use of resources. The allied health professional is in an excellent position to expand his or her role as a utilization gatekeeper. Since utilization of health care resources drives costs, there is a tremendous opportunity for allied health to make a significant contribution to cost constraint without compromising the quality of care. In order to step up allied health research efforts, however, a great deal needs to be done. Synergy among allied health professions must increase. As an essential first step, we must develop a common research agenda through collaboration with all major stakeholders in the health care system.

A number of outcomes research studies have been reported in allied health journals (Ohman 1995). These studies have attempted to measure the clinical and economic outcomes of specific allied health clinical interventions and delivery models. Examples of ongoing efforts include the Bureau of Health Professions' Allied Health Special Projects grant to develop monographs and videotapes on outcomes assessment in chronic obstructive pulmonary disease, stroke, and arthritis for distribution to baccalaureate level physical therapy, occupational therapy, respiratory therapy, and speech-language pathology programs; establishment of the National Education and Research Center for Outcomes Assessment in Healthcare (NERCOA) at Northeastern University; and practice-based outcomes and economics research on allied health and pharmacy practices (Barr 1995). Many associations—including the American Physical Therapy Association (APTA), the American Speech-Language-Hearing Association (ASLHA), the American Occupational Therapy Association (AOTA), and the American Dietetic Association (ADA)—have made outcomes research a high-priority item on their agendas. The American Association for Respiratory Care (AARC) and APTA have sponsored workshops for their members on outcomes research methods, and APTA has also published a bibliography of outcomes research specific to physical therapy interventions (Benjamin 1995).

The allied health professional is in an excellent position to expand his or her role as a utilization gatekeeper.

Unfortunately, there is no comprehensive, aggressive research agenda for allied health. Such an agenda would promote a greater degree of coordination among allied health professionals and other providers, encourage a more transdisciplinary approach, and, as a result, increase the value of the findings of these scientific investigations while identifying high-priority research projects.

The Task Force recognizes the critical need for practice effectiveness studies that include the cost efficiency of services and the effectiveness of interventions in assessing clinical outcomes. But investigations must also examine the method of health care service delivery (Lyons 1994).

Rehabilitation research, particularly that related to the measurement of functional outcomes and quality-of-life issues, must be a research priority; so, too, should studies that describe the relationship between educational preparation, credentialing requirements, and clinical effectiveness. Research undertaken now must deal with the present, but it must also guide us through decision making as it relates to reengineering our workforce.

Much research has been done in the areas of health promotion, disease prevention, and disease state management. But relatively little research has been conducted to learn the key determinants of success. Such information should prove invaluable to educators and practitioners alike.

As an essential first step, we must develop a common research agenda through collaboration with all major stakeholders in the health care system.

Funding Outcomes Research

Funding has been identified by many in allied health as an obstacle to the pursuit of outcomes research. Therefore, we must undertake a significant collaboration effort that will lead to partnerships. These partnerships must expand beyond educational institutions and professional associations to include payers. The allied health community understands that stakeholders will not offer funding for studies that do not tie into their values. Allied health professionals, educational institutions, associations, employers, foundations, payers, and the public share a number of values. Through collaboration, common values can be identified. From this process will flow a research agenda with priorities (Brook and Lohr 1985).

The allied health professions must also be prepared to invest in themselves. If they want to evolve along with the health care delivery system—to be integrated appropriately into the new system—the allied health professions must provide the resources necessary for qualified researchers to undertake efforts to identify innovative service delivery models and optimal skill mixes for their respective professions. Success in these endeavors cannot help but lead to a more efficient utilization of the allied health workforce; and the result will be significant progress toward the overarching goal of a balance between health care resource need and health care resource demand. Critical in this process is identifying misallocation of resources.

All stakeholders, including consumers, payers, and providers, are willing to change as the health care system evolves; but all these stakeholders need guidance from objective evidence rather than from assumptions about convenience, or wishful thinking. The only way the allied health community will successfully navigate the challenges of the current, dynamic health care environment is to (1) fully franchise allied health professionals as outcomes researchers, and (2) facilitate collaboration with all stakeholders to form an ongoing research collaborative in which a common research agenda can be developed and prioritized. Coordinated efforts could then be undertaken to obtain funding and institutional support to assure that all research efforts are credible and generalizable across the United States. The allied health professional, by virtue of specialized education and competency testing, is in one of the best positions to guide appropriate utilization of health care services without compromising the quality of care. Such efforts will lead to significant cost reduction—to the benefit of all stakeholders—since utilization is the ultimate cost driver.

Implementation Plans for Outcomes Research

Plan: Develop clinical outcomes measures for allied health treatment across multiple patient care settings for disease states.

NCAH recommendation addressed:

Recommendation 7. As is the case for all health professions, the provision and financing of services furnished by allied health professionals should be based on objective and scientific information that validates the clinical effectiveness and cost efficiency of service delivery models.

Purpose of Plan

The National Commission on Allied Health concluded that more innovative, efficient, and effective utilization of allied health professionals will dramatically decrease the cost of health care while increasing access to and the quality of care. As an essential first step in advancing these goals, the Commission recommended that improved measures of clinical outcomes and cost should be developed for treatments across patient care settings and that these standard guidelines should be disseminated to health-care providers, insurers, and professional associations. The

Implementation Task Force reviewed the recommendations of the National Commission within the context of the current environment and concluded that the recommendations are still appropriate and, as yet, unfulfilled. The progress of health care outcomes research has not kept pace with the evolving health care system. With few exceptions, clinical research on outcomes and cost in allied health has not progressed to a useful level. It is imperative that joint research programs be undertaken integrating the perspectives of various health disciplines. The Implementation Task Force offers this plan and the three other recommended research plans in the belief that allied health must advance an aggressive research agenda to dramatically decrease the cost of health care while increasing access and assuring quality.

Goals of Plan

1. Create, through a collaborative research project, models of validation for the clinical effectiveness and cost efficiency of allied health services.
2. Distribute the project's findings, including clinical outcomes measures and a model for stakeholder partnership in outcomes research in allied health, to key stakeholders.

Implementation Plan

1. The Bureau of Health Professions, Agency for Health Care Policy and Research, payers, and professional associations should develop competitive research grants and partnerships for the development of outcomes research in allied health. These funding and partnership opportunities should include measurement of the clinical outcomes effectiveness of allied health service delivery in high-cost, high-volume, and high-risk patient populations. Disease states such as asthma, diabetes, stroke, and cancer should be included in multiple settings such as inpatient, outpatient, home health, and long-term care.
2. A competitive request for proposals should be developed by an advisory task force composed of the stakeholders, including allied health professionals, payers, researchers, and consumers of health care. The project should identify measurable clinical outcomes from the care and treatment of patients across the continuum of care for disease states.
3. Components of allied health professional training, education, and practice across a broad spectrum of disciplines should be represented on the research team.
4. The research project should also examine existing guidelines for measurement of outcomes, such as the Health Plan Employer Data and Information Set (HEDIS) developed by the National Committee for Quality Awareness (NCQA).
5. A published report of the findings of the research project, including a model for stakeholder partnership in outcomes research in allied health, should be distributed to professional associations, payers, and the Agency for Health Care Policy and Research (AHCPR).
6. Potential leadership and funding sources include AHCPR, the Centers for Disease Control and Prevention (CDC), the Association of Academic Health Centers, the National Education and Research Center for Outcomes Assessment in Healthcare (NERCOA), and payers in general. It is noted that AHCPR has announced that its fiscal year (FY)1999 budget is $171 million. An increase in funding of 17 percent over the FY 98 budget was intended to support investigator-initiated research to improve health outcomes and strengthen quality measurement and quality improvement, including the organizational and financial aspects of health care. Priorities identified by AHCPR include the following: (1) Support improvements in health outcomes; (2) strengthen quality measurement and improvement; and (3) identify strategies to improve access, foster appropriate use, and reduce unnecessary expenditures.

Impact of Plan

Developing clinical outcomes measures for allied health treatment across multiple patient care settings for disease states will provide the basic tools needed to objectively assess alternative service delivery models. Thus it will help document the most clinically effective and cost-efficient skill mixes and delivery modes and improve the quality and cost efficiency of future health care.

Plan: Create a data base of State licensure requirements for allied health professionals and promote outcomes-based criteria.

NCAH recommendation addressed:

Recommendation 8. Model scope of practice regulations should be developed based on proven outcomes and effectiveness measures. States that have developed improved models should share such information widely.

Purpose of Plan

The purpose of this plan is to stimulate a reduction in State-to-State variations in practice regulation and promote improved models. Creating a data base of all State licensure requirements for allied health professionals and identifying those with outcomes-based criteria will focus attention on unnecessary variations and on model regulations.

Goals of Plan

1. Evaluate State licensure guidelines for allied health professionals and develop a data base that highlights outcomes-based models of State regulation.
2. Promote greater uniformity in State licensure requirements for allied health professionals.
3. Promote development and adoption of model guidelines for use by State licensure agencies and professional regulatory boards.

Implementation Plan

1. Convene a task force of allied health professional associations and networks to plan the development of a data base of State licensure guidelines for allied health professionals. The task force should develop a plan to compare State guidelines and adopt or develop outcomes-based criteria for licensure and professional regulatory boards to reduce State-to-State variations in practice.
2. The lead professional association or network will organize the evaluation of State licensure guidelines and coordinate development of a data base for access by all allied health professionals.
3. Allied health professional associations will collaborate to examine and identify how outcomes-based guidelines can be developed, introduced into State regulatory agencies, and used to reduce State-to-State variations in professional practice.
4. The lead professional association or network will convene a summit conference of allied health associations to (a) review the data base of State measures, (b) develop a plan to initiate a proposed practice act for legislators, and (c) facilitate development of a uniform State model for presentation to the Council of State Governments and State legislatures. Consumer stakeholders should also be invited to serve as patient advocates and reviewers during the development of recommendations to the State regulatory agencies.
5. The Health Professions Network and the Council on Licensure Enforcement and Regulation (CLEAR) should partner in leading the project in collaboration with the Association of Schools of Allied Health Professions and the National Network of Two-Year Schools in Health Science and Technology

Education. Existing members of the Health Professions Network have indicated that they have grassroots member organizations that would be willing to assist.

6. A report of the findings and recommendations should be distributed to and published by allied health professional associations. The report should also be distributed to the State regulatory agencies and to schools and colleges of allied health.

Impact of Plan

Implementing this plan will lead to a more uniform standard of State licensure requirements for allied health professionals based on outcomes and effectiveness measures. Implementation should help increase awareness among all health professions of the high standards and objective criteria used to qualify allied health professionals. Over the longer term, more uniform criteria based on outcomes and effectiveness measures will improve health care delivery.

Plan: Establish contracts or Requests for Proposals (RFPs) to examine the clinical and cost effectiveness of allied health practitioners.

NCAH recommendation addressed:

Recommendation 13. Create incentives for public/private partnerships to share, support, and accelerate outcomes-based research studies to identify clinical and cost-effective allied health practices that will improve quality, decrease cost, and increase access.

Purpose of Plan

The purpose of this plan is to create incentives for public/private partnerships to share, support, and accelerate outcomes-based research studies to identify clinical and cost-effective allied health practices that will improve quality, decrease cost, and increase access.

Goals of Plan

1. Stimulate outcomes-based research to assess and improve the effectiveness and efficiency of allied health practices.
2. Support public/private partnerships to conduct outcomes-based research on allied health practices.
3. Develop models of clinically effective, cost-efficient allied health practices.

Implementation Plan

1. The Bureau of Health Professions, the Health Care Financing Administration, or the Agency for Health Care Policy and Research should initiate contracts that give priority funding to applicants who partner with an allied health profession, health care provider, and a payer/insurer to examine the clinical and cost effectiveness of allied health practitioners and to develop models of allied health practices that are as effective as, and more efficient than, traditional health-care delivery patterns. Coordinated by the Health Professions Network, professional organizations representing the various allied health disciplines would collect data on how increased utilization of allied health professionals could expand access to services for previously underserved populations.
2. The contractors, consisting of an allied health profession, an academic institution, a health care provider, and a payer/insurer (which could be the same as the health care provider) will develop outcomes-based research studies designed to document the clinical and cost-effective allied health practices that will improve quality, decrease cost, and increase access. These studies should use appropriate, published practice guidelines as the basis of the research design. Current guidelines for

outcomes measurements developed by the Health Plan Employer Data and Information Set (HEDIS) should be employed.

3. Partners must define the respective roles and the responsibilities of each member. Financial analysis should calculate and compare the cost for the delivery of the health care service with and without the contribution of the allied health profession. Total service cost should be used.
4. Appropriate project leadership includes the Bureau of Health Professions or the Health Care Financing Administration, professional associations, health care providers, and payers/insurers. The successful bidder will manage the contract under the supervision of the Bureau of Health Professions or the Health Care Financing Administration.
5. Results of the outcomes research for specific allied health professions will be published and disseminated to all partners, which include the allied health professional organizations, the health care providers, and the payers/insurers.

Impact of Plan

Implementing this plan will help document the most clinically effective and cost efficient allied health practices and how they improve the quality, cost, and accessibility of health care. As a result, the strategy will (1) identify best practices to advance the state of the art of allied health professions, and (2) provide objective data to enable allied health professionals to be integrated most productively into the evolving health care system.

Plan: Establish an institute for outcomes measurement training of allied health professionals that is treatment/patient focused.

This is effectiveness research training with an emphasis on real practices, providers, and patients studied under typical conditions, not the commonly defined efficacy studies, which focus on a narrow range of questions related to the safety or viability of a clinical treatment of an experimental nature.

NCAH recommendations addressed:

Recommendation 14. Develop and implement a prioritized health services research agenda to examine the unique and collective contributions allied health professionals might make to a more effective, efficient, and accessible health care delivery system. This agenda must be supported by an infrastructure of allied health professionals trained as health services researchers who are supported by technology, information systems, and adequate funding.

Recommendation 15. Develop the infrastructure to support allied health clinical research and the career development of allied health clinical researchers.

Purpose of Plan

The purpose of this plan is to provide training to allied health professionals in the measurement process for assessing outcomes in specific disease states.

Goals of Plan

1. Develop the infrastructure to support allied health clinical research and the career development of allied health clinical researchers.
2. Establish an institute for outcomes measurement training to advance the goal of obtaining objective data on the clinical and cost effectiveness of allied health practices.

Implementation Plan

1. Establish an institute for outcomes measurement training that will provide ongoing support and infrastructure for training allied health professionals as researchers

supported by technology, information systems, and adequate funding. A Request for Proposals (RFP) to plan and conduct a training conference on outcomes assessment will be open to bidders in FY 99.

2. The contractor will provide the administrative, logistical, and professional services necessary to conduct a workshop (3–5 days) to train allied health professionals in the outcomes assessment process. The contractor will convene an Outcomes Research Advisory Board (Board) of stakeholders to assist in developing the curriculum and establishing the selection criteria for participants. The Board shall include, but not be limited to, two members from academic institutions, two from professional associations, a representative of a health care plan, an appropriate Federal and State representative, a consumer advocate, and one member from the Implementation Task Force. The Agency for Health Care Policy and Research should be invited to participate as the Federal representative to the Board. In addition, the National Committee for Quality Assurance should be represented. The Board shall not exceed nine members. Based upon the recommendations of the Board, the contractor shall (1) select appropriate, nationally recognized researchers to participate in the project, and (2) specify curriculum and work materials for the outcomes research workshop. The curriculum shall focus on outcomes measurement training that is based on the patient's disease state. It is expected that selected academic faculty will work with the Board to develop the curriculum and work materials required for the project.
3. Appropriate leadership for the project includes the Agency for Health Care Policy and Research, the Health Professions Network volunteer task force, and the Bureau of Health Professions. The successful bidder will manage the contract under the supervision of the Bureau of Health Professions.
4. The contractor will produce and disseminate a monograph on outcomes assessment measurement for allied health professionals.

Impact of Plan

Implementing this plan will increase the ranks of appropriately trained outcomes researchers among allied health professionals. Thus it will enable these researchers to take their appropriate place in the research community and both document and publish information about the objective performance of allied health in patient care. As a result, opportunities for allied health professionals to be integrated most effectively into evolving modes of health care delivery will be greatly enhanced. In addition, objective data on alternative practices will spur changes to increase the clinical effectiveness and cost efficiency of allied health services delivery.

Implementing all of the research plans presented in this chapter will have a significant impact, over time, on both research and education. Research capabilities and results will be enhanced in several ways: (1) Data will be accumulated on the contribution of the allied health professions to patient care outcomes; (2) outcomes data that documents the relationship between cost-effectiveness and patient outcomes will be generated to provide the basis for effective treatment protocols; (3) a cadre of allied health research mentors and researchers will be created to ensure continued acquisition of outcomes measurements; and (4) accreditation processes that reduce unnecessary duplication and conserve resources will be a by-product of effectiveness measurements.

The impact of outcomes research will extend beyond the domains of research and practice. Ultimately, the data collected on effectiveness will significantly affect the manner in which allied health professionals are trained. This result will be responsive to the following statement made by the National Commission on Allied Health in its final report:

Eventually, all allied health curricula will need to better address new ways to expand access, ensure appropriate services, involve patients and family in decisions, and assess appropriateness of technology.

Revisions to allied health curricula undertaken to meet the needs of the marketplace must be based upon outcomes data that document the interrelationships among patient outcomes, cost-effectiveness, and curricular competencies. The proposed implementation strategies for research are designed primarily to facilitate collection of the kinds of data that will be integral to reformulating curricula and treatment modalities. The strategies are also intended to promote collaboration among educational systems, professional associations, the health care services industry, and payers to ensure responsiveness to workplace demands, create clinical experiences that are appropriate for the practice settings, and coordinate accreditation processes to conserve resources and reduce unnecessary duplication.

Chapter 4. Collaboration

Purpose

Throughout the *Report of the National Commission on Allied Health* (U.S. Department of Health and Human Services [DHHS] 1995), collaboration is identified as indispensable to the successful implementation of all of the Commission's recommendations. Collaboration is necessary both among allied health professions and between these professionals and other stakeholders.

One of the major assets of the allied health community is that each profession possesses unparalleled expertise in its respective specialty area. Unfortunately, this extraordinary depth of knowledge has contributed to a tendency by many allied health professions to focus inwardly. Traditionally, these professions undertake activities aimed at improving a particular profession's ability to ensure quality care within its specialty area. These activities take the form of analyzing the adequacy of current educational preparation, competency testing, and service delivery models. While these activities should continue, it is essential that efforts expand to encompass all stakeholders involved in the Nation's health care delivery system.

The National Commission and the Implementation Task Force recognize the challenges manifest in organizing effective, ongoing, collaborative efforts; but the significant benefits of such collaboration—to allied health and to the entire health care system—are clearly worth the effort required. It is important for the allied health professions to (1) gain a more comprehensive knowledge of their sister professions in the allied health community, and (2) advance mutual understanding among all stakeholders of the capabilities, potential contributions, and needs of each. If the allied health community is to succeed in efforts to increase understanding by all stakeholders of its potential contributions and value, it must first organize and unify itself in order to present, clearly and strongly, information about the allied health professions that will promote such understanding. Since most stakeholders are unaware of the contributions that allied health professionals can make, current impressions of services provided by these professionals run the gamut from discretionary to life support.

Before the advent of managed care, there was little appreciation of the allied health professional's role as a resource gatekeeper. Yet, if a successful gatekeeper must possess knowledge about indications, contraindications, and costs, then many of the allied health workforce are well positioned not only to provide services, but also to minimize misallocation of resources by ensuring appropriate utilization of those services.

Collaboration could produce a synergy that would lead to a more evidence-based decision-making model.

Furthermore, the benefits of collaboration will lead to more effective delivery of services, increased patient satisfaction, better problem solving, and ultimately, improved quality of care. Recognition of this added value could promote innovations in the areas of education, skill mix, and service delivery models. The National Commission has affirmed that the allied health community wants to work with all stakeholders. With such collaboration, a synergy could occur that would lead to a more evidence-based decision-making model.

Chapter 4 is divided into two main sections. This "Purpose" section identifies principal areas where collaboration is needed and explains why it is needed; the final section of the chapter presents implementation plans developed by the Implementation Task Force to advance

collaboration in support of shared values, pursuant to recommendations of the National Commission.

Collaborating on Research

Much has been written about the need for outcomes or effectiveness research. Although the allied health community has initiated some research efforts, there is a notable lack of studies that include more than one profession. Since it is extremely difficult, and in some cases impossible, to sequester the contributions of an individual discipline (Benjamin 1995), it follows that if we are to use research results to guide innovation in new approaches of care and perhaps new skill mixes, we must increase collaborative research efforts among allied health professions. We must also organize an ongoing collaborative research activity that includes the public, employers and employee groups, foundations, professional associations, State and Federal Government agencies, educational institutions, and representatives of health care delivery systems. If such an effort were to come to fruition, the benefits for all players within the health care delivery system would be profound.

All stakeholders have indicated the need to improve access to health care and decrease costs without compromising quality. Transdisciplinary research is essential if we hope to realize all three goals. There have been sporadic efforts to innovate in terms of skill mix and delivery models; but thus far, progress toward reducing costs without compromising quality or access has met with limited success. (According to the Health Care Financing Administration, health care costs will exceed $2 trillion by 2007, as compared with approximately $73 billion in 1970 and more than $699 billion in 1990 [Smith et al. 1998].)

Involving the allied health community in research projects with other components of the health care system would make additional insight and expertise available. Such involvement would make it more likely that costs would indeed be reduced rather than shifted from one area to another. If we are pursuing a reduction in total health care cost, we must, therefore, commit to *broad collaboration that includes all stakeholders,* in research as well as other areas.

Involving the allied health community in research projects with other components of the health care system would make it more likely that costs would indeed be reduced rather than shifted from one area to another.

Collaborating on Education

The allied health education system needs to introduce creative, "outside the box" methods to prepare the allied health professionals of the future. It has been noted all too often that the paradigm that existed under the cost-plus-reimbursement system has been superseded. We must prepare allied health professionals to go beyond the obsolete "wait and treat" approach; we must empower them *through education* not only to provide consistently high quality care, but also to enhance critical thinking and communication skills in order to help patients avoid triggers that lead to more costly health care events. These goals cannot be achieved by allied health educators alone. Nor can they be achieved solely by expanding the educational efforts to involve allied health practitioners. We must include payers, consumers, and provider employers as well. Once again, we return to the need for collaboration.

The outlines of the emerging health care delivery system are becoming clear. The system needs care providers who are prepared to work across the health care delivery spectrum—from critical care to assisting patients in their homes and all points in between. Success in this endeavor requires extraordinary collaboration, in education as in other areas, between provider, payer, and consumer groups. Their combined input will ensure that the allied health

professional of the future is sensitive to the three key health care issues—access, quality, and cost—and their interrelationships. Moreover, stakeholder input will assure that 50 to 60 percent of the health care workforce—allied health—is in step with the values that are emerging along with the new health care delivery system (O'Neil 1993).

Cost Reduction

In an environment of extraordinary change, it is not unusual to experience tensions. This is particularly true when, as today, cost reduction is a major goal. Currently, for example, there is a move toward multiskilling, and in some instances, de-skilling. These efforts may conflict with activities that are leading to "up-skilling." Many policymakers lack an understanding of the role of allied health professionals and think that they just perform tasks, whether those tasks be therapeutic or diagnostic. These policymakers do not recognize that allied health professionals know not just the motor skills aspect of the intervention, but also the indications, contraindications, and alternatives that are available and consistent with the patient's care plan. Many allied health professionals have not only clinical, but also relative-cost knowledge and are well-positioned to contribute to cost-effective care. No one is better positioned than the allied health professional.

Several allied health professions have developed practice guidelines (Ohman 1994). These guidelines assist allied health professionals in their efforts to allocate resources effectively and minimize misallocation. In many instances, these guidelines have been used to develop Assess and Treat Protocols. These algorithms, when used by allied health professionals, have been found to minimize misallocation of care and to have a positive effect upon the constraint of health care costs (Stoller 1996). Unfortunately, these studies were conducted at the local or institutional level rather than under a multicenter design that would produce results that could be generalized nationally. Meaningful collaboration can lead to the design of studies that result in generalizable observations that are relevant nationally. Moreover, collaboration can also encourage other professions to investigate the use of protocols within their specific disciplines.

Care in Alternative Settings

The emerging health care delivery system needs care providers who are prepared to work across the health care delivery spectrum—from critical care to assisting patients in their homes.

Over the past few years, the use of care settings outside of hospitals has increased substantially. As an example, according to the Health Care Financing Administration (HCFA) Office of the Actuary, as of December 1997, *Medicare Part A Home Health Care Use* included 3.58 million beneficiaries served in the year 1996. These persons averaged 79 home visits each, for a total of approximately 283 million visits. Six years earlier, in 1990, Medicare beneficiaries averaged 44 home visits per person, resulting in almost 100 million total visits spread over 2.26 million beneficiaries. Thus we observe not only an increase in the number of beneficiaries served, but also a significant increase in the total number of home health care visits under Medicare Part A.

Skilled nursing facilities (SNFs) have also experienced a significant increase in Medicare beneficiary activity. HCFA data show that in 1994 Medicare received from Medicare SNFs slightly more than 300,000 claims representing $493 million in charges for respiratory therapy services. By 1996, Medicare was receiving from Medicare SNFs more than 580,000 claims representing $1.1 billion in charges for respiratory therapy services. This represents a growth of 280,620 claims and $658 million in charges. In the same period, claims from acute-care hospitals for respiratory therapy services decreased by more

than 531,000, with accompanying charges decreasing by approximately $417 million (Muse & Associates 1998). These statistics clearly demonstrate that care is being shifted from acute-care hospitals to other, less expensive care settings.

As the delivery of care has shifted from acute-care facilities to community-based organizations, employment patterns of allied health professionals have also changed. These professionals must, therefore, be prepared to be effective in a multitude of care settings owning various cultures. Success in this endeavor is largely dependent upon developing a network of clinical affiliates for allied health education programs. These affiliations will assist allied health educators in preparing students to work in several types of care settings that provide services ranging from direct treatment to patient education and consultation, including disease state management and health promotion.

Collaboration is needed not only to advance understanding, but also to form public-private partnerships. An ongoing collaborative effort will lead to an allied health agenda. This agenda must have input from all stakeholders and must range in subject areas from education (both professional and consumer), clinical services, and service delivery models to effectiveness research and competency documentation.

Scope-of-Practice Issues

The allied health community and other stakeholders—such as consumers, payers, and provider employers—share basic goals for the health care system. The National Commission and the Task Force believe that many allied health professionals are underutilized. This under-utilization sometimes occurs because of turf issues. Through collaborative efforts with other providers, this problem can be addressed. For example, there may be opportunities for skill sharing. There certainly are scope-of-practice overlaps; but until all stakeholders come together and jointly embrace the overarching goals of improved access, quality assurance, and cost efficacy, the overlap issue will continue to be dealt with on an ad hoc, haphazard basis. The allied health professions are beginning to come together to discuss such issues of mutual concern. They also welcome opportunities to partner with other stakeholders to advance common goals. To this end, the allied health community must organize itself in such a way as to facilitate collaboration and effective representation of the community to other stakeholders.

Allied Health Representation

The National Commission recognized the lack of allied health representation on policy and advisory boards and other deliberative bodies at the national and State levels. Some representation is in place, but usually it is profession-specific rather than for allied health as a whole. The allied health community must take the initiative to prepare individuals to serve as allied health representatives and must communicate to such boards and deliberative bodies the availability and value of qualified allied health representatives. When this is accomplished, a significant barrier to allied health representation will be removed.

Collaboration is the key to harnessing the enormous influence of the allied health professions on our Nation's health care system so that it complements the current and future efforts of other stakeholders and advances common goals.

Ongoing communication efforts must be undertaken to reach out and ensure that entities outside of the allied health community are aware of the availability of allied health representation. The implementation plans presented in the following section of this chapter represent a start toward organizing an ongoing mechanism within the allied health community for intracommunity communication and planning. Moreover, the

strategies can ensure that effective, ongoing communication occurs among all stakeholders. The days of fragmented approaches to our national health care problems are ending. It is now time to expand planning efforts to a more global level. We must undertake a comprehensive effort to bring about full utilization of the potential of allied health professionals in a variety of roles and a multitude of care settings. The influence of the allied health professions on our Nation's health care system, from both clinical and economic standpoints, is enormous. Collaboration is the key to harnessing this influence in such a way that it complements the current and future efforts of other stakeholders in the health care system and advances common goals.

The implementation plans presented in this chapter can ensure that effective, ongoing communication occurs among all stakeholders.

Implementation Plans for Collaboration

Plan: Convene an Allied Health Collaborative Steering Committee and conduct a conference to plan collaboration initiatives and promote an action agenda.

NCAH recommendations addressed:

Recommendation 1. Congress should authorize the establishment of a Consortium on Allied Health Practice, Education, and Research to guide and broaden the interface between allied health and other key health system players. Within this Consortium professional associations should work closely together to create a more unified crosscutting agenda for allied health. The Consortium should consist of a coordinating board that will consider overall policy and oversee its three committees—Education, Practice, and Research. The coordinating board and its committees should be representative of the following major stakeholders:

- employers and employee groups
- foundations
- professional associations
- State and Federal Government agencies
- educational institutions
- health care delivery systems
- the public

Recommendation 3. As a matter of priority, care should be taken to attain representation that better reflects the populations served by allied health providers. If the goal is optimal delivery of care, relevant and accessible education, and performance of high-quality research, every part of the system must speak to the consumer.

Recommendation 5. Allied health professionals, other members of the health care team, and health care management should collaborate to foster understanding and appreciation of one another's unique and collective interests and capabilities.

Recommendation 12. Educational institutions should collaborate with the health industry, government, and professions to implement initiatives to achieve workforce diversity throughout allied health.

Purpose of Plan

The *Report of the National Commission on Allied Health* stated that the allied health community is a tremendous education, research, and service resource, but it has not yet realized its potential in terms of contributions to education, research, and practice. This is due, in part, to a lack of integrated, comprehensive, and continued collaboration across all major stakeholders within each of these three key communities. Allied health providers constitute the largest and most fragmented segment of the health care workforce. Although allied health personnel work in all of the health care settings, they differ significantly in terms of the work they perform, the amount of

education they possess, and the regulatory control of their activities. Nevertheless, they form a vital part of the primary, secondary, and tertiary health care infrastructure and have many values and goals in common. For these reasons, the approximately 200 different allied health disciplines that make up a majority of the total health care workforce have the potential to positively address questions of cost, quality, research, diversity, and access to our health care system (O'Neil 1993).

To date, attempts to bring together selected allied health professionals nationally have focused on specific issues and, historically, have met with only limited success. This is partially due to the tendency to pursue discipline-specific recognition rather than a more global perspective toward health care delivery; lack of awareness, understanding, and appreciation of one another's unique and collective interests and capabilities; and the failure to include all major stakeholders in addressing issues. To achieve common objectives, collaboration is essential, not only among the allied health professions, but also in concert with all major stakeholders.

Allied health professions have not achieved, in their provider ranks, a level of ethnic and cultural diversity that reflects the population served now and in the future. Each profession must work toward developing a diverse workforce, thus contributing to the health care system's ability to provide appropriate services to the populations served. Cultural diversity and understanding among service providers is especially important if high levels of success are to be realized with wellness and disease management efforts.

Broad-based collaboration will strengthen and benefit all stakeholders by expanding understanding of both the issues and the possible solutions. Stronger collaboration will lead to a more comprehensive effort to better address concerns related to health care costs, quality, diversity, and research, as well as access to health care services. Communication, collaboration, and cooperation among the allied health professions and other major stakeholders is long overdue.

The allied health communities must take the lead in initiating collaboration among all allied health communities-of-interest, including academia, practice, professional associations, employers, policymakers, and consumers, to better meet the evolving workforce and educational demands of the 21st century. Without such collaboration, the potential contributions from allied health may be overlooked, with detrimental effects on cost, quality, diversity, and access in the emerging health care delivery system. Without proactive efforts to collaborate, allied health will remain a largely invisible giant that failed to take responsibility for its own destiny and to make its maximum contribution to the future of health care.

The Implementation Task Force developed this plan to help the allied health community rise to this challenge and advance collaboration recommendations of the National Commission. In this plan the Task Force identifies mechanisms that are feasible for the allied health community and other key stakeholders and thus hold promise to subsequently enhance the quality of health care for the public.

Goals of Plan

1. To foster an integrated, comprehensive, and continued collaboration across and between all major stakeholders in and related to the allied health community.
2. To create awareness, understanding, and appreciation of each allied health profession's uniqueness, and their collective interests, capabilities, and contributions.
3. To identify and include all major stakeholders in and related to allied health professions as they address issues relevant to the Nation's health care system.
4. To remedy the lack of objective information concerning past, present, and future contributions of allied health professionals.
5. To assist with planning for the number and mix of allied health professionals needed to

meet current and future demands of the emerging health care system for the 21st century.

6. To promote allied health provider diversity as reflective of current and future diverse populations served.

Implementation Plan

1. Pursuant to the National Commission recommendations and the implementation plan developed by the Task Force, a Request for Proposals (RFP) has been published by the Bureau of Health Professions of the Department of Health and Human Services' Health Resources and Services Administration (HRSA). The RFP solicits a contractor to provide the administrative, logistical, and professional services necessary to convene an Allied Health Collaborative Steering Committee and to conduct a conference to bring together representatives of the allied health community. The charge to the Steering Committee will be to work with the contractor to create a forum for promoting collaboration and cohesiveness among the allied health communities-of-interest, and to identify allied health leaders with global perspectives to help further define an action agenda with strategies for improving collaboration within the allied health community. The Steering Committee, together with the conference participants, will serve as the catalyst to promote collaborative initiatives on both the national and State levels.
2. The Allied Health Collaborative Steering Committee will be composed of two representatives each from the Association of Schools of Allied Health Professions (ASAHP), the National Network of Health Career Programs in Two-Year Colleges (NN2), the Health Professions Network (HPN), the health care industry (an employer and a payer), and the Implementation Task Force membership, and one consumer representative. Criteria for representation, to ensure collaboration and cohesiveness, will be clearly delineated by the contractor in the invitations to participate.
3. The contractor, together with the Steering Committee, will provide a framework for the following:
   a. Promoting collaboration and cohesiveness within the health professions community (including medicine, dentistry, pharmacy, and health service administration) among the allied health communities and between allied health and other key stakeholders such as public and private sector purchasers, employee and employer groups, foundations, professional associations, State and Federal Government agencies, educational institutions, and the public.
   b. Planning an agenda for action and coordinating the implementation of strategies to address critical issues and the National Commission on Allied Health's recommendations among the allied health communities and between allied health and key stakeholders.
   c. Planning a conference consistent with the above and to (1) initiate the interface between allied health and key stakeholders, (2) promote collaboration to seek positive solutions, and (3) where possible, highlight successful statewide initiatives that have effectively addressed issues and needs within a State.
   d. Reviewing possible marketing strategies to effectively promote the collaborative agenda.
4. A final report will be submitted by the Steering Committee to the Bureau of Health Professions outlining recommendations, along with implementation plans and guidelines for promoting ongoing collaboration within the allied health communities-of-interest. The report should also include how collaborative strategies can be used to address critical issues related to cost, quality, diversity, a research

agenda, and access to health care. The report should include plans for disseminating the strategies outlined in the report. An article or articles should be published in appropriate professional journals.

Impact of Plan

Implementing this plan would lay the groundwork and provide a strong impetus for much needed collaboration within the allied health professions and between allied health and all related stakeholders across the education, research, and practice communities. Over the long term, the fruits of this plan would greatly enhance the ability of allied health professionals to take their appropriate place in the health care delivery system and contribute to progress in the quality and efficiency of health care.

In addition, implementation would achieve the following:

1. Provide specific plans and guidelines for promoting collaboration within the allied health communities-of-interest.
2. Provide for dissemination of such plans to the allied health communities-of-interest.
3. Increase awareness on the part of Federal and State policy and advisory boards, as well as those in the private sector, of the competencies of allied health professionals and their integral role in the delivery of cost-effective, accessible, quality health care for consumers.
4. Include allied health in policy development and planning for the future in education, research, and practice to increase quality health care for consumers.
5. Facilitate the creation of incentives for public-private partnerships to share, support, and accelerate outcomes-based research studies to identify clinically effective and cost efficient allied health practices that will improve quality, decrease cost, and increase access.

It cannot be overemphasized that achieving these results requires collaboration on two levels. First, collaboration among the allied health professions will lead to broader and more effective representation of the allied health community in efforts to shape the future of health care and improve access, cost effectiveness, and quality. The voice of allied health in these efforts, to be clear and strong, needs to be as unified as possible. Greater collaboration among allied health professions will also lead to improved research capability, the results of which will provide guidance in all aspects of allied health, including educational preparation, competency documentation, core curriculum development, research, and a more accurate assessment of the impact of new models of care involving a multidisciplinary approach.

The next level of collaboration—between the allied health community and all other health care system stakeholders—is critical if allied health is to be a full partner in shaping and improving future health care delivery. A higher degree of collaboration among all stakeholders will lead to a more efficient use of funds committed to effectiveness research, a greater understanding of the value of the allied health professional, and, of equal importance, a greater understanding on the part of the allied health community of the priorities of other stakeholders. There can be no doubt that improved collaboration at this level will lead to a higher degree of partnering between health care services providers, payers, and consumers.

The efficiency of health care delivery must improve if we hope to balance access, quality, and cost. As paradigms are shifting, collaborative research efforts are essential to provide objective guidance for decision makers as they attempt to organize new service delivery models and broaden access across the health care continuum.

Ultimately, collaborative efforts must lead to a comprehensive research agenda that will address both the unique and the collective contributions of all components of the health care delivery system. Enhanced collaboration will lead to decreased compartmentalization and, as a result, have a positive impact on the ability of health care

providers to successfully address the challenges of the emerging health care delivery system in terms of service delivery, education, and competency documentation.

Plan: Develop practical mechanisms to increase representation of allied health professionals on State, regional, and national policy and advisory boards, and on various key deliberative bodies within Federal and State governments.

NCAH recommendation addressed:

Recommendation 4. Congress should authorize the Secretary of DHHS to establish the Office of Allied Health Professions within HRSA to:

- Advance the representation and, hence, the visibility of current and potential contributions of the allied health professions to education, research, practice, and policy development.
- Collaborate with other agencies to promote the representation of allied health on policy and advisory boards and other key deliberative bodies within the Federal Government. For example, allied health currently has no representation on the Advisory Council of the National Health Service Corps (NHSC) and is not even mentioned as a member of the NHSC multidisciplinary team.

Purpose of Plan

The voice of allied health is seldom heard on government or private-sector health policy and advisory boards at the national, regional, and State levels. The lack of allied health representation, whether on Federal agency advisory committees, research study sections, integrated health systems' boards, or third-party payment policy boards, diminishes health care progress due to a lack of information and understanding about the potential contributions of allied health professionals.

The allied health communities must work in collaboration with the Bureau of Health Professions and other agencies to promote representation of allied health on policy and advisory boards and other key deliberative bodies, not only within the Federal Government but also in the private sector. Furthermore, allied health State consortia and professional associations should collaborate to promote the representation of allied health on such boards and deliberative bodies at the State level. Increased allied health representation will enhance the visibility and awareness of current and potential contributions of the allied health professions to education, research, practice, and policy development to increase health care quality and access for consumers at minimum cost.

Goals of Plan

1. Increase the representation of qualified allied health professionals on Federal and State government and private-sector health policy and advisory boards and other key deliberative bodies.
2. Through increased representation, advance the visibility, knowledge, and understanding of the capabilities of allied health professionals and of their potential contributions to health care quality, access, and cost efficiency.

Implementation Plan

1. In collaboration with allied health leadership from the Association of Schools of Allied Health Professions, the National Network of Health Career Programs in Two-Year Colleges, and the Health Professions Network, the Bureau of Health Professions is the agency to assist in identifying Federal and State government as well as private-sector agencies and policy and advisory boards that do not include allied health representation and could benefit from allied health input.
2. Allied health leadership and the Bureau should develop a template to use in initiating dialogue

with such entities—to assess their mission and requirements for service, and to promote a consistent message about the benefits of including allied health.

3. The allied health associations should compile a data base of allied health individuals qualified to represent allied health on such boards and deliberative bodies, and their areas of expertise, to aid in the appointment process.
4. To assure the availability of qualified and effective allied health representatives to serve on policy and advisory boards, the Task Force recommends the adaptation and use of the Citizen Advocacy Center (CAC) strategies for supporting public members of health professions boards and governing bodies. Through discussion and strategic workshops, CAC identified the following three strategies to overcome obstacles to effective public participation, which should be adaptable to the allied health professions serving on policy and advisory boards:
   a. Perfecting methods for locating and placing qualified public representatives on regulatory or governing bodies.
   b. Defining the roles and missions of public members in the various settings in which they serve.
   c. Developing a strategic plan for training and supporting public members to enable them to carry out their responsibilities more effectively.

   Furthermore, a highly focused training course to teach practical skills for more effective performance on policy and advisory boards is under development by CAC. The use of the CAC's model and training course, to increase representation, must also be encouraged at the State level, with State allied health consortiums and professional associations taking the lead responsibility.

Impact of Plan

Implementing this plan would increase the awareness of other stakeholders about the competencies of allied health professionals; thus it would increase their understanding of the value of allied health contributions to the delivery of cost-effective, accessible, quality health care for consumers and communities. The longer-term impact would be more appropriate, effective integration of allied health professionals into the evolving health care delivery system.

By developing a data base of allied health professionals qualified to serve on health policy and advisory boards and deliberative bodies in both government and the private sector, and by promoting such representation, this plan would both facilitate and spur the appointment of appropriate allied health representatives. The result would be greater visibility for allied health on these bodies and an increase in mutual understanding and appreciation. Finally, implementing the Task Force's recommendation about adapting and using the CAC strategies and training course would increase the effectiveness of allied health representatives and their ability to advance goals and values they share with all stakeholders.

References

American Medical Association. *1998-1999 Health Professions Education Directory*. Chicago, IL: American Medical Association, 1998.

Barr JT. *Critical Literature Review: Clinical Effectiveness in Allied Health Practices*. Washington, DC: U.S. Department of Health and Human Services, Agency for Health Care Policy and Research, 1993. AHCPR Publication 94-0029.

Barr JT. "The Outcomes Movement and Health Status Measures." *Journal of Allied Health* 24(1):13–28, 1995.

Barry RJ and Barry PA. "Establishing Equality in the Articulation Process." National Network of Health Programs in Two-Year Colleges, Community College of Philadelphia, 1993. Unpublished paper.

Benjamin K. "Outcomes Research and the Allied Health Professional." *Journal of Allied Health* 24(1):3–11, 1995.

Brook RH and Lohr KN. "Efficacy, Effectiveness, Variations, and Quality: Boundary Crossing Research." *Medical Care* 23(5):710–722, 1985.

Council for Allied Health in North Carolina. *An Allied Health Workforce for the 21st Century: Ensuring Access and Quality for North Carolinians*. Chapel Hill, NC: University of North Carolina School of Medicine, 1994.

England M. "The Evolving Health Care System: Changing Paradigms and the Organized System of Care." *Journal of Allied Health* 26(1):7–12, 1997.

Far West Laboratory for Educational Research and Development. *National Health Care Skill Standards*. San Francisco, CA: Far West Laboratory for Educational Research and Development, 1995.

Finocchio LJ and Johnson CD. *Core Curriculum in Allied Health Education: Controversy, Consensus and the Continuing Conundrum*. San Francisco, CA: University of California, San Francisco, Center for the Health Professions, Pew Health Professions Commission, 1995.

Fuller K. "Issues in Allied Health Education: A Perspective from Rural Communities." Project on the Future of Allied Health, Health Resources and Services Administration, and the Pew Health Professions Commission, 1994. Unpublished paper.

Hallowell B. "Innovative Teaching Method to Enhance Training in Managed Care Issues." *Journal of Allied Health* 26(1):31–34, 1997.

Institute of Medicine. *Report to Congress on the Study of the Role of Allied Health Personnel in Health Care Delivery*. Washington, DC: National Academy Press, 1988.

Institute of Medicine. *Allied Health Services: Avoiding Crisis*. Washington, DC: National Academy Press, 1989.

Lyons KJ. "Current Organizational Research Agendas Related to Allied Health Practices." Paper prepared for the National Commission on Allied Health, December 1994.

Maillet J and Anesetti P. "New Jersey Allied Health Workforce Examination." University of Medicine and Dentistry of New Jersey, Newark, 1993. Unpublished paper.

McFadden ER Jr, Elsanadi N, Dixon L, Takacs M, Deal EC, Boyd KK, Idemoto BK, Broseman LA, Panuska J, and Hammonds T, et al. "Protocol Therapy for Acute Asthma: Therapeutic Benefits and Cost Savings." *American Journal of Medicine* 99(6):651–61, December 1995.

Mishoe SC, Valeri KL, and Beveridge LH. "A Survey of High School Seniors' Career Choices: Implications for Allied Health." *Journal of Allied Health* 22(1):33–43, Winter 1993.

Muse & Associates. *Respiratory Care Services in Medicare*. Report on study commissioned by the American Association for Respiratory Care. Washington, DC: Muse & Associates, June 1998.

National Consortium on Health Science and Technology Education. "Building Linkages, Health Science Career Path: A Conceptual Model." Pilot Draft. National Consortium on

Health Science and Technology Education, June 1998.

Ohman S. "Outcomes Assessment." *Journal of Allied Health* 24(1), Winter 1995.

Ohman SM. "Health Services Research in Allied Health: Literature Review." Paper prepared for the National Commission on Allied Health, December 1994.

O'Neil E. *Health Professions Education for the Future: Schools in Service to the Nation.* San Francisco, CA: Pew Health Professions Commission, 1993.

Perry DA, Freed JR, and Kushman JE. "The California Demonstration Project in Independent Practice." *Journal of Dental Hygiene* 68:137–142, 1994.

Pew Health Professions Commission. *Critical Challenges: Revitalizing the Health Professions for the Twenty-first Century.* Berkeley, CA: University of California at Berkeley, Center for the Health Professions, 1995.

Rensch S. "Articulation and Transfer." Developed for the National Network of Health Programs in Two-Year Colleges, Community College of Philadelphia, 1994. Unpublished paper.

Rich MW. "A Multidisciplinary Intervention to Prevent the Readmission of Elderly Patients with Congestive Heart Failure." *New England Journal of Medicine* 333(18):1190–5, November 2, 1995.

Smith S, Freeland M, Heffler S, McKusick D, and the Health Expenditures Projection Team. "The Next Ten Years of Health Spending: What Does the Future Hold?" *Health Affairs* 17(5):128–140, September/October 1998.

Stoller JK. "The Rationale for Respiratory Care Protocols: An Update." *Respiratory Care Journal* 43(9):719–23, 1998.

Stoller JK, Skibinski CI, Giles DK, Kester EL, and Haney DJ. "Physician Ordered Respiratory Care vs Physician Ordered Use of Respiratory Therapy Consult Service: Results of a Prospective Study." *Chest* 110(2):422–29, August 1996.

U.S. Department of Health and Human Services, Health Resources and Services Administration. *Eighth Report to the President and Congress on the Status of Health Personnel in the United States.* Washington, DC: U.S. Government Printing Office, 1992.

U.S. Department of Health and Human Services, Health Resources and Services Administration. *Seventh Report to the President and Congress on the Status of Health Personnel in the United States.* Washington, DC: U.S. Government Printing Office, 1990.

U.S. Department of Health and Human Services, Health Resources and Services Administration. *Sixth Report to the President and Congress on the Status of Health Personnel in the United States.* Washington, DC: U.S. Government Printing Office, 1988.

U.S. Department of Health and Human Services. *Report of the National Commission on Allied Health.* Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Bureau of Health Professions, Division of Associated, Dental, and Public Health Professions, 1995.

Postscript

Since the work of the Implementation Task Force began in December 1996, several projects have been undertaken that are relevant to the National Commission on Allied Health's recommendations. The projects are strategic in nature and will improve the allied health community's ability to positively influence the evolving health care delivery system.

The purpose of this postscript is to bring the reader up to date on three of these projects—the allied health leadership project, the education reform conference, and the Allied Health Data Collaborative project. (The National Commission's recommendation on the data collection project is outside the mission of the Implementation Task Force, but is relevant to its goals.)

Leadership

In its report, the National Commission on Allied Health made several references to the need to develop leaders within the allied health community. These individuals must be prepared by experience and training to participate in meaningful collaboration with all other health care stakeholders. Such collaboration could then lead to a more thoughtful use of allied health professionals.

The Commission indicated that much health care reform planning has occurred without representation from the allied health community. The Task Force believes that several approaches, including organizing formal collaborative efforts with stakeholders, will further the goal of comprehensive allied health involvement. For these efforts to be effective and productive, however, it is imperative that the allied health community includes members who are qualified to participate at the leadership level.

In 1998, two leadership conferences were held to train potential allied health leaders in the areas of practice, education, and research. These conferences were supported by a cooperative grant issued by the Bureau of Health Professions, U.S. Department of Health and Human Services. The allied health community provided the remaining funding through its professional organizations.

Conference participants were selected from applicants who are members of one of the following allied health organizations:

- Association of Schools of Allied Health Professions (ASAHP)
- Health Professions Network (HPN)
- National Network of Health Career Programs in Two-Year Colleges (NN2)

Individuals selected to participate in the program attended two separate week-long conferences. The first was held in the spring and the second in the fall of 1998. Participants first received information about how national public policy is made. Topics included the operations of Congress, Federal agencies, and lobbyists. National issues that directly affect allied health practice and education were also discussed. Collaboration with other allied health disciplines was encouraged, and attendees were assigned to interdisciplinary projects related to allied health.

The fall conference was devoted to leadership. Attendees received information about methods of identifying personal leadership strengths and weaknesses and mentoring skills. Time was also devoted to methods of leadership for a time of change.

Attendees generated several documents, which ranged in subject from the development and use of clinical practice guidelines to clinical outcomes research for allied health professions.

Future conferences will provide education in the areas of clinical outcomes research, allied health awareness, promotion of diversity within the allied health community, government relations, practice guidelines, graduate education,

and representation on deliberative bodies. Persons selected for the conferences must be nominated by their respective organizations and must have demonstrated their potential for assuming leadership roles within their discipline as well as in the allied health community.

Education Reform

As described in the education chapter of this report (Chapter 2), the Implementation Task Force designed a strategy to consider allied health clinical education reform within the context of the emerging values of the evolving health care delivery system.

A national conference to pioneer allied health clinical education reform has been planned for July of 1999. The conference is sponsored by the Health Resources and Services Administration, U.S. Department of Health and Human Services, and hosted by the Department of Medical and Research Technology, University of Maryland School of Medicine. The purpose of the conference is to provide key stakeholders with an opportunity to collaborate on a strategic plan for clinical training, to ensure the availability of allied health care professionals who are qualified to meet the needs of patient populations and health care services providers. Among the many topics to be addressed are the following:

- Program standards
- Accreditation issues
- Service provider needs

Looking to the needs of the 21st century, conference participants will also undertake an assessment of the availability, appropriateness, and cost-effectiveness of training for allied health professionals. National professional societies, accrediting agencies, managed care organizations, hospital associations, third party payers, and 2- and 4-year college programs in allied health will be represented at the conference.

The Allied Health Data Collaborative Project

In the spring of 1997, the U.S. Bureau of Health Professions issued a contract to the Association of Schools of Allied Health Professions to "establish a partnership between data users and producers who will comprise the Allied Health Data Collaborative as recommended by the National Commission on Allied Health..." (ASAHP Proposal, 1997).

ASAHP convened more than 50 individuals from 43 institutions, associations, agencies, and organizations. The stated purposes of the conference included learning about existing data collection activities, such as those undertaken by the U.S. Bureau of Labor Statistics, and identifying priority gaps in data. Overarching goals of the conference were to develop working relationships among the organizations represented and to formulate plans for the data collaborative.

Two invitational meetings were held with selected organizations. These meetings provided a common ground of knowledge regarding data collection on the status of the allied health workforce. Organizational commitments were also obtained to establish the collaborative and develop viable plans for followup steps.

Attendees drafted a consensus statement, which was supported by 16 organizations. Progress has been made toward the establishment of a data collaborative, but it has not yet been possible to design data collection instruments or to undertake major primary or secondary data collection.

A second phase of this project will be undertaken to step up efforts to collect, analyze, and disseminate allied health workforce data. These data will include information on the supply, demand, and utilization of the allied health workforce. This data collection goal will be achieved through the establishment and active operation of a data collaborative that includes both data producers and users. ASAHP will oversee the development and operations of the collaborative project.

Appendix A. Implementation Task Force of the National Commission on Allied Health

Chairman

Sam P. Giordano, MBA, RRT
American Association for Respiratory Care

Members

Deborah Bailey Astroth, RDH, BS
University of Colorado Health Sciences Center

John A. Cromer, PhD
St. Petersburg Junior College

Denise M. Harmening, PhD
University of Maryland School of Medicine

Gail A. Nielsen, BSHCA, RT ® FAHRA
Iowa Health System

Wanda Hancock, MHSA
Medical University of South Carolina

Robert Thorpe, EdD, RT
University of North Carolina at Chapel Hill

Suzanne C. Mercure
Barrington & Chappell

Project Director

Norman Clark, DDS, MPH, JD
Bureau of Health Professions
Health Resources and Services Administration

Consultants

Caroll Deuben, PhD
University of Detroit

Bernice Parlak
Health Resources and Services Administration

Henry Montes
Health Resources and Services Administration

Staff

Cygnus Corporation

Appendix B. Survey Mailing List

American Association of Community Colleges
American Association for Respiratory Care
American Association of Retired Persons
American Association of State Colleges and Universities
American Dental Hygienists Association
American Dietetic Association
American Health Care Radiology Administrators
American Health Information Management Association
American Hospital Association
American Occupational Therapy Association, Inc.
American Physical Therapy Association
American Public Health Association
American Society for Clinical Laboratory Science
American Society of Clinical Pathologists
American Society of Radiologic Technologists
American Speech-Language-Hearing Association
Association of Academic Health Centers
Association of Schools of Allied Health Professions
Association of Schools of Public Health
Benefits Administration Manager
Citizen Advocacy Center
Committee on Allied Health Education and Accreditation
Health Insurance Association of America
Indian Health Service
International Hearing Society
International Society for Clinical Laboratory Technology
National Association of Community Health Centers
National Association of County Health Officials
National Association of Emergency Medical Technicians
National Association of Health Services Executives
National Association of Home Care
National Association of Rehabilitation Facilities
National Black Association for Speech, Language and Hearing
National Center for the Advancement of Blacks in the Health Professions
National Consortium on Health Science and Technology Education
National Council of Community Hospitals
National Health Council, Inc.
National Network for Health Care Programs in Two-Year Colleges
National Rural Health Association
National Society of Allied Health
National Society for Histotechnology
National Therapeutic Recreation Society
16 Institutions Health Science Consortium
Society of Diagnostic Medical Somnographers
Society of Nuclear Medicine

Appendix C. Survey Respondents

American Association of Community Colleges

American Association for Respiratory Care

American Dietetic Association

American Occupational Therapy Association

American Society of Radiologic Technologists

American Speech-Language-Hearing Association

Association of Schools of Allied Health Professions

Citizen Advocacy Center

National Consortium on Health Science and Technology Education

Appendix D. Survey

NATIONAL COMMISSION ON ALLIED HEALTH

IMPLEMENTATION TASK FORCE

SURVEY

For your additional comments, please use the space provided on pages 9–10.

I. Please identify successful projects or activities your organization has implemented in the following areas:

A. Public relations or public awareness. Please provide a brief description of the project including the following aspects:

1. Identification of resources

_____

_____

2. Key players

_____

_____

3. Roles and responsibilities

_____

_____

4. Time lines for implementation up to and including completion

_____

_____

BEST COPY AVAILABLE

5. Measures for success

_____

_____

B. Has your organization developed or begun to develop a core curriculum?

_____

_____

1. What other groups have you contacted to assist with this project?

_____

_____

2. Do you anticipate that the core curriculum could be used across multiple professions?

_____

_____

3. If so, which ones or how many?

_____

_____

C. Has your organization developed a graduate track?

_____

_____

1. Is it specific to your profession?

2. Is it designed to develop an entry level person or as a career ladder?

II. Please provide us with information relating to efforts undertaken by your organization in the area of collaboration. These areas can include collaboration among and between professions. The Task Force is especially interested in learning about the following:

A. What were the goals of the collaboration effort?

B. Briefly describe the collaboration process.

C. What resources were necessary to execute the project?

D. What were the roles and responsibilities of key players?

E. How long did the project take?

F. What measures were used to gauge success?

III. Please provide information concerning your organization's efforts related to the development and promulgation of practice guidelines. The Task Force is especially interested in the following:

A. How long have you been developing practice guidelines?

B. Briefly describe the process you are using to develop the guidelines.

C. What resources are necessary to execute the project?

D. What prompted your organization's decision to become involved in guidelines development?

_____

_____

E. What are the roles and responsibilities of the key players involved in this project?

_____

_____

F. What efforts have you undertaken to assure acceptance of the guidelines by both members of your profession and other components of the health care delivery system?

_____

_____

G. For which allied health professionals have you developed practice guidelines?

_____

_____

IV. The Task Force is currently developing implementation strategies in three major areas—1) *Education Reform*, 2) *Collaboration,* and 3) *Outcomes Research*—and asks what strategies you would suggest to facilitate implementation of the Commission's recommendations. Please bear in mind that we are looking for practical, down-to-earth strategies that do not necessarily depend on outside funding. A preferred strategy would be one that ties into an organization's values and can be achieved by committing resources currently available to the organization in question. Please relate your recommended strategies to the three above-mentioned categories, and consider the following:

A. What strategies do you recommend to facilitate implementation of the Commission's recommendations?

B. Who will undertake your strategies?

C. What resources are necessary to implement these strategies?

D. What is the expected result of the efforts?

E. What other organizations would be involved as collaborators, facilitators, enablers, etc?

F. What funding sources and other resources are available to implement your strategies?

V. The Task Force wants to develop implementation strategies that tie into your organization's values. Please take a few moments to indicate to us what critical issues are facing your organization and what you are currently doing to address these issues. The Task Force is especially interested in learning:

A. Your critical issues.

_____

_____

B. The priorities of your critical issues.

_____

_____

C. Why you consider these issues to be critical.

_____

_____

D. What the projected impact would be if the issues are not addressed successfully.

_____

_____

E. If you would be willing to work with other organizations sharing similar critical issues.

_____

_____

VI. Has your organization addressed cultural diversity?

A. Do you have a committee or task force in place?

B. Have specific projects or programs been developed for this purpose?

C. If so, what are they?

D. Were they evaluated and if so, were they successful?

VII. Has your organization developed a list of core competencies? If so, please provide.

Additional Comments

Appendix E. Glossary

AARC—American Association for Respiratory Care, formerly the American Association for Respiratory Therapy.

Accreditation—Official approval or recognition of conformance to a set of standards; usually involves providing with credentials.

ADA—American Dietetic Association.

AHCPR—Agency for Health Care Policy and Research.

Allied health professional—A health professional (other than a registered nurse or physician assistant) who has received a certificate, an associate's degree, a bachelor's degree, a master's degree, a doctoral degree, or postbaccalaureate training in a science relating to health care; who shares in the responsibility for the delivery of health care services or related services, including (1) services relating to the identification, evaluation, and prevention of disease and disorders, (2) dietary and nutrition services, (3) health promotion services, (4) rehabilitation services, or (5) health systems management services; and who has not received a degree of doctor of medicine, a degree of doctor of osteopathy, a degree of doctor of veterinary medicine or equivalent degree, a degree of doctor of optometry or equivalent degree, a degree of doctor of podiatric medicine or equivalent degree, a degree of bachelor of science in pharmacy or equivalent degree, a graduate degree in public health or equivalent degree, a degree of doctor of chiropractic or equivalent degree, a graduate degree in health administration or equivalent degree, a doctoral degree in clinical psychology or equivalent degree, or a degree in social work or equivalent degree.[1]

Allied health clinical research—Examination of practice effectiveness and the development of tools to measure the effect.

AOTA—American Occupational Therapy Association.

APTA—American Physical Therapy Association.

ASAHP—Association of Schools of Allied Health Professions.

ASLHA—American Speech-Language-Hearing Association.

CAAHEP—Commission on Accreditation of Allied Health Educational Programs (see CAHEA).

CAC—Citizen Advocacy Center.

CAHEA—Committee on Allied Health Education and Accreditation.

Care coordinator—The health professional responsible for the overall administration of a plan or care for an individual patient.

CDC—Centers for Disease Control and Prevention.

Certification—A form of health professions regulation and title protection that specifies the requirements an individual must meet in order to use a particular occupational title.

CLEAR—Council on Licensure Enforcement and Regulation.

Clinical practice guidelines—Systematically developed statements prepared by AHCPR to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances.

Cost containment—The use of various payment mechanisms, regulations, or market forces (or a combination of any or all three dynamics) to reduce the rate of increase in health care expenditures.

Cost effective—A relative term used to describe an action that either provides more units of effectiveness for the same cost compared with an alternative action or provides the same units of effectiveness for less cost than the alternative. However, if an action provides more outcomes (effects) but incurs more costs, this approach can be considered to be cost-effective if society is willing to pay the extra expense to achieve the extra effect.

[1]Health Professions Education Extension Amendments of 1992, Sec. 701 PHS Act.

Cost efficient—The same unit of outcome achieved at less cost.

De-skilling—The process of shifting the performance of specific tasks from a highly skilled, higher paid worker to another, lower paid worker who has had limited educational preparation.

DHHS—U.S. Department of Health and Human Services.

Dual-admission—A type of articulation arrangement in which a student who applies to a 2-year college and agrees to take a specific set of courses can be simultaneously admitted to a 4-year institution.

Effectiveness—Producing a desired outcome.

Efficacy—Having the capacity to produce a desired outcome.

Employer—The health care industry employer, e.g., hospital, home care company, physician, or dentist.

HCFA—Health Care Financing Administration.

Health Careers Opportunity Program—Established by the Federal Government to address underrepresentation of minorities throughout the health professions.

HEDIS—Health Plan Employer Data and Information Set.

HMO—A health maintenance organization, an organization that provides comprehensive health care for a fixed monthly premium per member. Premiums are paid directly to the plan and do not vary with utilization of services.

HPN—Health Professions Network.

HRSA—Health Resources and Services Administration.

Health services research—A field of inquiry that examines the impact of the organization, financing, and management of health care services on the delivery, quality, cost, access to, and outcome of such services.

Home health care—Health services such as nursing, therapy, and health-related homemaker or social services provided in the patient's home.

IOM—Institute of Medicine, a branch of the National Academy of Sciences that performs studies of health care delivery.

Licensure—A form of occupational regulation whereby the profession is given a State-sanctioned monopoly. As of 1920, all States had licensed medicine, osteopathy, dentistry, veterinary medicine, optometry, and pharmacy (MODVOP) as well as nursing. Individuals who have satisfied the educational requirements of these professions must also be licensed in the States in which they wish to practice.

Linkage—An agreement, either written or oral, between one institution and another institution, agency, organization, or facility for the coordination, provision, or referral of information or programs.

Long-term care—The wide array of health and social services for persons who are so functionally disabled that they require assistance in daily, routine activities.

Managed Care—An organized system of health care delivery in which primary care providers control utilization of and referrals to specialty care.

Medicare—A Federal program created by Title XVIII of the Social Security Act that provides health insurance benefits primarily to persons over the age of 65 and others eligible for Social Security benefits.

Multicompetent/multiskilled—Includes three models:

> ***Multiple technician***. The education/training for these individuals is designed to produce a worker with limited training in several areas, including office activities, laboratory, and radiology (example—medical assistant). These individuals usually do not have sufficient education in a specific area for certification as a radiographer, medical laboratory technician, or medical record technician. This person has sufficient education to perform basic level functions only. Medical Assisting is a CAHEA/ CAAHEP accreditation and graduates of these institutions can be certified in this field.

Multiple credentialing. This multicompetent person would have specialized credentials in two or more areas, which are generally related fields. For example, a person could hold two or more allied health credentials in radiology-related fields or in the medical laboratory area. Usually the second credential area can be acquired in reduced education time, based on successful completion of the first education program and certification. Multiple credentials may also be in two unrelated fields (example: respiratory therapy and medical technology), but this pattern usually requires a longer education time to complete the requirements of the second field.

Practitioner with added skills. This multicompetent practitioner would have a credential in a specific field and have additional education/training in another area but not to a certification/credential level. For example, a registered nurse may do limited laboratory tests or x-ray exams. The added skill may also be in an area where there is no specific certification.[2]

NCAH—National Commission on Allied Health.

NCHSTE—National Consortium of Health Science and Technology Education.

NCQA—National Committee for Quality Awareness.

NERCOA—National Education and Research Center for Outcomes Assessment in Healthcare.

NHSC—National Health Service Corps.

NHCSSP—National Health Care Skill Standards Project.

NLM—National Library of Medicine, a branch of the National Institutes of Health.

NN2—National Network of Health Career Programs in Two-Year Colleges.

Outcomes research—A method of investigating relationships that exist among outcomes of interest, variations in the process of care, and the structural features of care that are important in affecting those outcomes.

Payer—Includes individuals, insurers, and the Federal Government who pay for health care.

Pedagogy—The art and science of teaching, education, and instructional methods. Translation of the foregoing future directions into workable recommendations and action requires careful and systematic thought.

Postsecondary education—Formal or informal education or training that occurs after high school instruction has been completed.

Primary care—"First contact" health care, as viewed by the patient, that provides at least 80 percent of necessary care and a comprehensive array of preventive as well as curative services. Primary care is typically rendered by general practitioners, family practitioners, internists, pediatricians, obstetrician/gynecologists, and mid-level allied health practitioners (e.g., physician assistants and nurse practitioners).

Purchaser—The individual or group seeking health care services.

Quality of life—Defined functionally by a patient's perception of performance in physical and occupational function, psychological state, social interaction, and somatic sensation.

Registration—A form of health professions regulation usually involving adherence to minimum standards; may or may not require testing or enforcement.

SNF—A skilled nursing facility. A facility with an organized professional staff that provides medical, continuous nursing, and various other health and social services to patients who are not in an acute phase of illness but who require primarily restorative or skilled nursing care on an inpatient basis.

Technician—A general category of allied health professional trained and educated to render certain basic procedures. Technicians usually receive less than 2 years of postsecondary education and practice; they are supervised by allied health technologists. Technicians include physical therapy assistants, medical laboratory technicians, radiologic

---

[2]Cox K.H., Wells D.A., and Wheeler C. "Institutional Responsiveness." National Network of Health Career Programs in Two Year Colleges. Tarrant County Junior College NE, 1994. Unpublished paper.

technicians, and respiratory therapy technicians. Also referred to as allied health assistants.

Therapist/Technologist—A second general category of allied health professionals trained to instruct and supervise allied health technicians. Technologists usually receive more than 2 years of postsecondary training. Technologists are trained to evaluate patients, diagnose problems, develop treatment plans, and perform a variety of clinical tasks. Also referred to as allied health therapists.

Third-party payer—Insurance company or governmental agency that reimburses a provider for services rendered to an individual who is eligible for such benefits.

2+2 program—A mutually agreed upon standard set of courses that are completed at the 2-year college and then transferred as a group to a 4-year college.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

☐ This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.

☒ This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").